

GLOBAL CIVIL SOCIETY AND BIOLOGICAL AND CHEMICAL WEAPONS

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Chemical and biological warfare is the use of poison and disease for hostile purposes. Until the late nineteenth century, the distinction between poison and infectious disease was not a clear one. "Disease" was used to refer to ailments whether caused by poison or pathogen, toxic agent or microbe. Indeed, many toxins, 'biological agents [which] owe their pathogenicity to toxic substances that they themselves generate' (WHO 2001: 3), can be classed as both chemical and biological weapons. A recent report by the World Health Organization (WHO) defined biological weapons as 'those that achieve their intended target effects through the infectivity of disease-causing microorganisms and other replicative entities, including viruses, infectious nucleic acids and prions', and chemical weapons as 'those that are effective because of their toxicity, i.e. their chemical action on life processes capable of causing death, temporary incapacitation or permanent harm' (WHO 2001: 3).

Chemical and biological (CB) weapons have often been considered together—in law, in military organization, in political debate, and in the public mind. One of the best explanations of this approach dates from a 1965 conference:

The dangers to world security posed by all classes of biological and chemical weapons are closely inter-related. Both in public opinion and in military practice it does not appear possible to maintain any lasting distinction between incapacitating and lethal weapons, or between biological and chemical warfare. The great variety of possible agents forms a continuous spectrum, starting from those that are temporarily incapacitating and ending with highly lethal ones. If the restraints on the practice of any kind of biological or chemical warfare are broken down, the entire spectrum of these weapons may come into use. (Rotblat 1972: 242)

The spectre of chemical and biological warfare is not new. Chemical weapons have been used on the battlefield since the First World War and, as weapons

of terror and sabotage, CB weapons have been around for many centuries. The massive use of chemical weapons in the First World War brought CB warfare to the attention of a general public which, by and large, found it repugnant and contrary to the laws of war. Scientific advances in the 1940s opened up the potential for using biological agents not only for sabotage but also as tactical and even strategic weapons. After the Second World War, CB weapons were classed together with nuclear weapons as 'weapons of mass destruction'. However, they were initially overshadowed by their new, more destructive cousin, returning to the international political agenda only in the late 1960s.

Subsequent decades witnessed a number of international negotiations resulting in treaties consolidating what had previously been a fragmented and weak international regime against CB warfare. The heart of this strengthened regime consists of two disarmament treaties—the 1972 Biological Weapons Convention (BWC) and the 1993 Chemical Weapons Convention (CWC)—which reaffirm the prohibition on the use of CB weapons, prohibit their development, production, and stockpiling, and require all member states to destroy any stockpiles. The regime is much stronger for chemical than for biological weapons, since the more recent CWC includes an international verification system of unprecedented intrusiveness whereas no such system was included when the BWC was negotiated. A verification protocol to strengthen the BWC was rejected by the US in 2001. The prospects for further consolidation of the international regime against CB warfare currently look bleak. Indeed, the primary current concern is to ensure that the existing regime is sustained and is not undermined.

As suggested in the 2001 edition of this Yearbook, global civil society is 'a fuzzy and contested concept' (Anheier, Glasius, and Kaldor 2001: 11). In some people's minds, global civil society means activist groups with large constituencies like Greenpeace or grass-roots networks such as the anti-globalisation movement. However, there are few, if any, such

Box 5.1 : Chemical and biological agents stockpiled or weaponised since 1946¹

Tear gases, other sensory irritants, and other disabling chemicals:

- 10-chloro-5,10-dihydrophenarsazine (adamsite, or DM)
- ?-chloroacetophenone (CN)
- ?-bromophenylacetonitrile (Iarmine, BBC or CA)
- 2-chlorobenzalmalononitrile (CS)
- dibenzoxazepine (CR)
- oleoresin capsicum (OC)
- 3-quinuclidinyl benzilate (BZ)

Choking agents (lung irritants):

- phosgene
- chloropicrin

Blood gases:

- hydrogen cyanide

Vesicants (blister gases):

- bis(2-chloroethyl) sulfide (mustard gas)
- 2-chlorovinylchloroarsine (Lewisite)
- bis(2-chloroethylthioethyl) ether (agent T)
- tris(2-chloroethyl)amine (a nitrogen mustard)

Nerve gases:

- ethyl N,N-dimethylphosphoramidocyanidate (tabun, or GA)
- O-isopropyl methylphosphonofluoridate (sarin, or GB)
- O-1,2,2-trimethylpropyl methylphosphonofluoridate (soman, or GD)
- O-cyclohexyl methylphosphonofluoridate (cyclosarin, or GF)

- O-ethyl S-2-diisopropylaminoethyl methylphosphonothiolate (VX)
- O-ethyl S-2-dimethylaminoethyl methylphosphonothiolate (medemo)
- O-isobutyl S-2-diethylaminoethyl methylphosphonothiolate (VR)

Further toxins

- Ricin
- Saxitoxin
- Clostridium botulinum toxin
- Staphylococcal enterotoxin
- Aflatoxin

Bacteria and rickettsiae

- Bacillus anthracis (anthrax)
- Francisella tularensis (tularemia)
- Brucella suis (brucellosis)
- Burkholderia mallei (glanders)
- Burkholderia pseudomallei (melioidosis)
- Yersinia pestis (plague)
- Rickettsia prowazeki (typhus fever)
- Coxiella burnetii (Q fever)

Viruses

- Venezuelan equine encephalitis virus

Source: (WHO 2001)

¹ Toxic and infective antipersonnel agents stockpiled or otherwise weaponised for state forces since 1946 according to official documents of possessor states

organisations or movements active in CB disarmament. Applying this definition to the organisations and individuals that are involved could lead to the following conclusion: 'Global civil society has not been active in the CBW arena. A small group of specialized NGOs almost exclusively in the North have been. Whether or not you call this largely academic group civil society depends on your definition; but it's worth noting the restricted base' (Hammond 2003).

While not ignoring these facts, in this chapter I use the broad definition of 'global civil society' provided in the 2001 edition of this Yearbook: '[T]he sphere of ideas, values, institutions, organizations, networks and individuals located *between* the family, the state, and the market, and operating *beyond* the confines of national societies, polities, and economies' (Anheier, Glasius, and Kaldor 2001: 17). Therefore, this chapter assumes that the academics and researchers who follow CB disarmament are a part,

Box 5.2: Chemical and biological warfare programmes since 1946

Chemical weapons

Albania*
Bosnia-Herzegovina*†
China*
France*
India*
Iran*
Iraq†
Japan*+
South Korea*
Russia*
United Kingdom*
United States*
Yugoslavia*†

Biological weapons

Canada§
France§
Iraq†
Russia§
United Kingdom§
United States§

* Countries declaring past or present chemical weapons programmes under the CWC.

§ Countries declaring past or present biological weapons programmes under the BWC confidence-building measures.

† Iraq declared chemical and biological weapons programmes under United Nations Security Council Resolution 687.

‡ Bosnia-Herzegovina and Yugoslavia declared the same site, a former chemical weapons production facility near Mostar in Bosnia-Herzegovina.

+ In 1997 Japan declared the (now destroyed) chemical weapons production facility used by the Aum Shinrikyo cult as it was under government jurisdiction at the time.

albeit a small and highly specialised part, of global civil society. Similar organisations and individuals can be found in related issue-areas such as nuclear disarmament or landmines; but they are generally one element of a larger network which includes activist and advocacy organisations (Short 1999; Johnson 2000). For a number of reasons, this combination has so far not materialised in relation to CB disarmament.

This chapter will attempt to answer two main questions: why has civil society involvement in CB disarmament been so restrained when compared with, for example, its involvement in nuclear disarmament? And do recent developments both within CB disarmament and within global civil society more generally mean that this characterisation may be losing its accuracy?

The first section explains the development and use of CB weapons. The second section outlines the three principal ways in which CB weapons have been framed by governments and civil society. The third and fourth sections set the scene for the fifth and sixth by describing the civil society organisations

involved in CB disarmament and external factors which influence their composition and activities. In so doing, these two sections aim to answer the first of the questions posed above. The fifth section summarises the international political response to CB weapons, including the contribution of civil society where appropriate. The sixth section describes the methods by which civil society has sought to exert its influence on CB disarmament. Together, these two sections are designed to provide preliminary answers to the second of the questions posed above. The chapter concludes by considering what has been and what remains to be achieved in CB disarmament and by proposing an alternative frame within which further progress could be made.

The Development and Use of Chemical and Biological Weapons

Early developments

CB warfare as currently understood has existed since the early twentieth century. However, as the existence of ancient bans on the use of poison in warfare and historical accounts of battles testify, the use of chemical and biological agents for hostile purposes has a much longer history. Through the centuries, clouds of poisonous smoke have been used to overcome fortifications and to reduce resistance within besieged cities, sometimes successfully but often unsuccessfully (SIPRI 1971b: 125–6). During the siege of the Crimean city of Caffa in 1346, the attacking Tatar forces used catapults to throw their plague victims into the Genoese city, whereupon the subsequent outbreak forced the defenders to flee (Wheelis 2002a).

During the nineteenth century, as synthetic chemicals became more readily available, there were numerous proposals for the military use of chemicals. But it was only with the later industrialisation of chemistry that large-scale use of chemical weapons became possible. Germany was first to use lethal CW in the First World War but the other belligerents soon followed suit. The inter-war period saw chemical weapons used during the Russian civil war (1919–21), by British forces in the Middle East and Afghanistan in the early 1920s, and in colonial wars by Spain in Morocco (1921–7), by Italy in Libya (1930), by the USSR in Sinkiang (1934), by Italy in Abyssinia (1935–6), and by Japan in China (1937–45). In the 1940s, Japan also used relatively primitive biological weapons in China; but until the 1940s biological warfare on a large scale was not technologically feasible and was primarily seen as a weapon of sabotage (SIPRI 1971b: 111).

A number of reasons have been given as to why chemical weapons were not used militarily during the Second World War, including the deterrent value of either side's stockpiles, the availability of protective equipment, and Hitler's personal aversion to chemical

weapons after being exposed to them in the First World War. However, toxic chemicals were of course used to kill millions of Jews and others in extermination camps.

A quantum leap in the development of chemical weapons occurred with the discovery by German scientists of the nerve agents sarin and tabun, which were much more aggressive than earlier weapons. In biology, new developments during the 1940s, particularly in the field of aerobiology, opened up the possibility of the tactical or even strategic use of biological weapons (SIPRI 1971b: 123). In the 1950s, the first of a family of more toxic nerve agents, the V-agents, was produced.

During the 1990s, the use of CB weapons by non-state actors became a major concern, particularly in the West. A defining event was the 1995 sarin attack in Tokyo by Aum Shinrikyo

CB programmes after the Second World War

After the Second World War, a number of states retained an interest in CB warfare. The US, UK, and Canada agreed a division of labour on the research, testing, and production of CB weapons, formalised through a trilateral agreement. The UK and Canada abandoned their offensive CB warfare programmes in the 1950s and 1960s but continued defensive work. The USSR also continued its CB warfare programmes, eventually establishing the world's largest stockpile of chemical weapons. A number of other European and Asian countries have also operated CB warfare programmes since the Second World War (see Box 5.1). While these countries have admitted past or present CB warfare programmes, a number of other countries are suspected of possessing CB weapons but have made no public admission.

During the 1950s and 1960s, the US carried out a series of large sea and land trials of CB weapons to assess the effectiveness of CB weapons and its vulnerability to them. In 1969, the US unilaterally renounced possession of lethal and incapacitating biological weapons and declared its support for a global ban. At the time, the renunciation was justified by claims that biological weapons were ineffective and unreliable. However, it later transpired that the US renounced biological weapons and pushed for a global ban for precisely the opposite reason. The trials of the 1950s and 1960s had demonstrated that biological weapons posed a potential threat to cities: 'It was

therefore important to discourage the development and production of these weapons by additional countries and to maintain US strategic deterrence based on other weapon systems' (Tucker 2002: 128).

Chemical weapons have been used in at least three conflicts in the mid- to late twentieth century, once again all in the developing world. In Vietnam, the US used tear gas and herbicides despite widespread international criticism, in the Yemeni civil war Egypt used chemical weapons against the Royalist forces (1963–7), and Iraq used chemical weapons against Iran and its own Kurdish civilians (1983–8). In contrast, biological weapons have not verifiably been used in combat since the end of the Second World War.

The USSR had a biological weapons programme and believed the US renunciation to be a deception. While joining the global ban on biological weapons, the USSR accelerated its programme by concealing activities within a seemingly legitimate civilian concern (Alibek and Handelman 1999). US and UK suspicions about this programme were confirmed only later by Soviet defectors.

Proliferation and use in developing countries

By the 1980s, both East and West no longer regarded chemical weapons as an essential part of their arsenals and decided to negotiate their stockpiles away. In addition, all BWC members had undertaken to continue negotiations on a chemical weapons ban. Fear of each other's weapons was replaced by fear of proliferation of CB weapons to developing countries. These fears were confirmed by the use of chemical weapons by Iraq against Iran and its own civilians in the 1980s, by the revelation of an apparent Libyan chemical weapons programme, and further disclosures about Iraq's CB warfare programmes by United Nations weapons inspectors in the 1990s. In the developing world, CB weapons were seen as force-equalisers—the 'poor man's atom bomb'—either against regional adversaries or against the US (Robinson, Stock, and Sutherland 1994: 711).

A number of countries, especially in the Middle East, are suspected of possessing CB weapons. The US Central Intelligence Agency mentions Iran, Iraq, Libya, North Korea, Syria, and Sudan as possessing or

developing CB capabilities, while State Department officials have listed the same countries but also add Cuba. Some of these countries are not members of the CWC or BWC and these allegations cannot therefore be subjected to international verification.

However, Iran and Cuba are members of both the CWC and BWC, and Iraq, Libya, and North Korea are BWC members; but the US has chosen not to make use of the mechanisms provided for in each treaty for investigating violations. In addition, it is widely assumed that Israel, a member of neither the CWC nor the BWC, possesses stockpiles of CB weapons, in addition to its nuclear arsenal (Cohen 2001).

During the 1990s, the use of CB weapons by non-state actors became a major concern, particularly in the West. A defining event was the 1995 sarin attack in Tokyo by Aum Shinrikyo and the subsequent discovery that the cult had previously launched 19 attacks with CB weapons, most of which had failed (Smithson and Levy 2000: 103). Although fears that Aum's activities would set a precedent for other terrorists to follow have not been realised, a great deal of government attention and resources has been committed to preventing CB terrorism, especially in the US.

This was evident before the 2001 anthrax letters in the US, but American anti-CB terrorism programmes have been enhanced massively since then, although there is no proven link between the anthrax letters and international terrorism. While many allegations have been made about the CB capabilities of al-Qaeda, there is no publicly available evidence that the organisation has developed a sophisticated CB capability.

Iraq's alleged possession of CB weapons was a primary justification for the 2003 US-UK invasion. Between 1991 and 1998, United Nations weapons inspectors uncovered a large chemical weapons programme and oversaw the destruction of many chemical weapons. The inspectors also discovered a biological weapons programme but their further investigation was hampered by Iraqi non-cooperation. When the inspectors were withdrawn in 1998, much of the infrastructure of Iraq's CB programmes had been destroyed but many questions remained unanswered.

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When the inspectors returned in 2002, they encountered a lack of substantive cooperation in addressing the unresolved issues but also did not find any significant stocks of undeclared CB weapons before they were withdrawn again in 2003. American and British military forces are now searching for hidden CB weapons in Iraq but, at the time of writing, had yet to find anything despite extensive intelligence data, information from pre-war defectors, and now information from people within Iraq.

Despite this history of the development and use of CB weapons, they have never played a central role in military strategy. They have instead remained on the periphery of war-fighting doctrine and capability, with even militaries being reluctant to adopt CB weapons, preferring instead the reliability of high explosives. Developed countries have largely abandoned their CB warfare programmes but have maintained protective programmes for their armed forces, leaving today's CB weapons in the hands of a small number of developing countries unable to afford similar protection against CB weapons. While the chances of CB weapons being used in a major international conflict have thus decreased, the likelihood that such weapons will be used in so-called 'New Wars' has increased (Kaldor 1999). The use of CB weapons in 'New Wars' is likely to see a return to the age-old practice of poison and disease being used to intimidate and terrorise civilians rather than between armies on a battlefield.

Current technological developments

Scientific and technological progress will influence the future development and use of CB weapons. Current advances in biotechnology and pharmacology hold out the potential for significant gains but also run the risk of being misused for hostile purposes (Wheelis 2002b). The Harvard geneticist Matthew Meselson (2000: 16) asks: 'Every major technology—metallurgy, explosives, internal combustion, aviation, electronics, nuclear energy—has been intensively exploited, not only for peaceful purposes but also for hostile ones. Must this also happen with biotechnology, certain to be a dominant technology of the twenty-first century?'

If so, the prospects are frightening:

During the century ahead, as our ability to modify fundamental life processes continues its rapid



Front cover of the British *Daily Mirror* tabloid, 8 January 2003

advance, we will be able not only to devise additional ways to destroy life but will also become able to manipulate it—including the processes of cognition, development, reproduction, and inheritance. A world in which these capabilities are widely employed for hostile purposes would be a world in which the very nature of conflict had radically changed. Therein could lie unprecedented opportunities for violence, coercion, repression, or subjugation. (Meselson 2000: 16)

Developing countries do not possess the resources and capabilities to misuse biotechnology in this way. Instead, it is the actions of major developed countries which should be of concern. Commenting on revelations about secret US biodefence research, Wheelis and Dando (2002: 6) argue:

The likelihood that the US programme goes well beyond the projects so far revealed further suggests that the US may be embarking on an exploration of the military applications of biotechnology—actively exploiting it to develop an offensive 'non-lethal' chemical weapons capability; beginning to use it to explore possible offensive bioweapons development strategies as part of threat assessment; and eager to

use it to develop antimateriel BW. We fear that this is pioneering very dangerous ground.

Although at first glance so-called 'non-lethal' CB weapons might seem more acceptable than lethal ones, the introduction of 'non-lethal' CB agents onto the battlefield undermines the existing taboo against the use of any poison or disease for hostile purposes and brings with it the risk of escalation to lethal CB agents. In addition, the description 'non-lethal' is a clear misnomer as in certain situations such weapons can have a similar lethality to conventional weapons, as demonstrated when Russian special forces used a derivative of the chemical fentanyl to end the siege of a Moscow theatre in October 2002 (Klotz, Furmanski, and Wheelis 2003). This incident, and reports that the United States transported riot control agents and incapacitating chemicals to the forces which invaded Iraq (Lean and Carrell 2003), has raised awareness of the potential that novel weapons, even 'non-lethal' ones, based on biotech research have for undermining the international regime against CB warfare (Dando 2003).

Framing Chemical and Biological Weapons

How an issue is framed influences the way civil society addresses it and the resonance the issue has with the general public (Keck and Sikkink 1998). Three distinct but related frames can be identified as having been applied to CB weapons often concurrently, namely, the 'taboo' frame, the 'WMD' frame, and the 'CB terrorism' frame.

The first of these frames still very much applies to CB weapons today and the other two frames depend upon it. The taboo against the use of poison in warfare has ancient and cross-cultural roots. References to toxic warfare can be found in the Indian epics *Ramayana* and *Mahabharata* and in later Chinese and Greek sources. From the Sanskrit Laws of Manu which forbade the use of poison weapons 'a line of ancestry can be drawn for the

1925 Geneva Protocol, and therefore for the 1993 [Chemical Weapons Convention] as well. It is a culturally diverse ancestry, reaching back not only through Hague and Roman law via Grotius, but also through the warfare regulations which the Saracens derived from the Koran' (Robinson 1998: 17). For many centuries, 'any use of poison, even against soldiers, has come to be understood as an unacceptable practice of warfare. The use of poison has come to be stigmatized as immoral in and of itself' (Price 1997: 26).

Just why CB warfare has been delegitimised to such an extent is disputed. A 1973 study refers to a 'deep psychological aversion among the majority of people, including the military, who become aware of CB weapons ... Poison and disease can unnerve people to an extent which other dangers cannot; and the outbreaks of mass hysteria and the superstitions which they have provoked in the past are well recorded' (SIPRI 1973a: 118). The number of popular films and novels about escaping viruses testifies to this. Another explanation is that the aversion to CB warfare is deeply rooted in human nature, 'perhaps in human chromosomes themselves' (Mandelbaum 1981: 39).

Whatever the rationale, it cannot be denied that there is a particular odium and fear associated with CB weapons in the popular imagination. This is one reason why the international community has been relatively successful in negotiating disarmament treaties for CB weapons. The main products of the 'taboo' frame include major elements of the present-day international regime against CB warfare such as the 1899 and 1907 Hague Conventions and Declaration and the 1925 Geneva Protocol.

Despite their widespread delegitimation, CB weapons, like other weapons systems, are considered within the 'state security discourse'. This discourse is based upon 'an essentialized notion of state sovereignty' in which the state possesses a monopoly on the use of force as 'necessary' to the preservation of the state, and the possibility of their removal from national arsenals is seen as a threat to the state. The 'state security discourse' thus 'effectively forecloses the capacity of civil society to contest or to question the weapons of war that secure its existence' (de

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Box 5.3: The politics of fear: historical precedents

Since late 2001 the idea that terrorists could use chemical, biological, or nuclear weapons has dominated the news. States have used this to justify curtailing civil liberties at home and pursuing aggressive foreign policies. Most notably it has been used to justify America and Britain breaking the UN Charter's prohibition of pre-emptive war. The use of the spectre of chemical and biological weapons by a government to instil fear in its own population, in order to advocate a particular policy, has historical precedents.

The first example is from the United States (Jenkins 2002). After the First World War, American chemists, chemical warfare officers, and chemical manufacturers launched a campaign with two goals. The first was to secure wartime investments in the new American artificial dye industry by getting a high tariff imposed on foreign dye imports. The second was to stop the army establishment closing down the giant chemical warfare programme America had developed during the First World War. America had been preparing to produce and use more poison gas in 1919 than Britain, France, and Germany combined. The campaign's strategy was to convince Americans that German aeroplanes and airships would soon be able to cross the Atlantic and drop new poison gases on American cities. It was argued that the only way to prevent such an attack was to deter Germany by developing the world's greatest chemical warfare capability.

The problem the campaign faced was that Americans believed that the vast reaches of the Atlantic Ocean made such an attack impossible, and many military experts believed that the actual use of chemical weapons in the First World War had shown they had real limitations as it was difficult for artillery to build up the large concentration of gas needed to kill; gas masks, clothing, and shelters provided a defence; and it was not clear that gas was more effective than high explosives.

To overcome these difficulties, the leaders of the chemical campaign described bomber aircraft and poison gas as being in their 'infant stage'. This meant that their use in the First World War was no guide to their future potential. This transformed them into blank screens for popular fantasies. Americans could

imagine aircraft crossing the Atlantic and annihilating the entire population of New York, Washington, Chicago, and other cities in a single air raid.

There was no such German threat. Germany's wartime government had been replaced by a Social Democratic administration hostile to a new war. After years of war the German people would not initially support a new war. Even as late as 1929, the historian A. J. P. Taylor (1981: 59) reports, 'the most popular cry in Germany was "No More War" not "Down with the Slave Treaty"'. The annihilation of American cities by a transatlantic attack was also impossible. The shape of buildings, wind conditions, and the necessity of either accurate bombing or the laying of a gas plume by precise level flying close to the ground all make it difficult to build up a lethal concentration of gas over the whole of a large city. These difficulties are multiplied if the city is defended by either aircraft or anti-aircraft guns, and if the civilian population is equipped with gas masks. The problems become intractable when the bombers must cross the Atlantic Ocean.

My second example is from Germany (Fritzsche 1993). The 1930s saw the emergence of a coalition between German veteran air pilots, air strategists, aviation engineers, and Nazi Party ideologists. They sought to overcome what they identified as the cause of German defeat in the First World War: the collapse of civilian morale in November 1918. Their success in this would enable Germany to pursue an aggressive expansionist foreign policy. They argued that, instead of seeing themselves as civilians whose defence against air attack should be left up to technical experts (fire wardens, police, the Red Cross, civil-defence officials), German men and women should see themselves as soldiers on the home front whose task was to keep the nation working so that German armies could win the war. The goal of civil defence was accomplished when 'the individual thinks, feels, and acts as a fighter' and 'is as disciplined as a soldier'. All citizens must become bound into 'one unbreakable national community'. Or, as one air-defence poster's slogan summed it up, 'One People, One Danger, One Defence'.

Like the American chemical campaign, the coalition played on German fantasies about air power

and poison gas. This was achieved through a strategy of saturating Germany with images and writings showing Germans' total vulnerability to the air threat and by getting Germans to experience the threat as a lived reality by participating in air defence.

The strategy included (1) exhibitions showing aerial photographs. These sought to show that big cities, and the nation as a whole, formed a giant system which could be fatally disrupted by air attack. (2) German cities were subjected to simulated air attacks to demonstrate their vulnerability. On 24 June 1933, 'unknown foreign' aeroplanes bombed Berlin with leaflets. The journal *Flugsport* warned that the next time it might be 'gas or incendiaries'. (3) Across Germany the Reich Air Defence League installed eight-foot high dummy bombs, marked with a vivid yellow stripe. In city squares aerial explosives dangled from street lamps and streetcar wires. (4) The German Airports League, founded in 1933, and heavily subsidised by the Nazis, provided another vehicle for educating Germans about the aerial danger and, more importantly, through its glider clubs, in persuading civilians that they should be actively involved in defending the nation. (5) In physics classes students learnt about the mechanics of flight, in chemistry they studied poison gas, in literature they read the memoirs of air aces, and in history they studied the development of aviation and how Allied restrictions during the 1920s on aviation had left Germany vulnerable to air attack. (6) Teachers also discussed the theories of air strategists, showed students how to wear gas masks, and drilled students in how to remain calm during air raids. School rooms became centres of air-mindedness: model aeroplanes hung from the ceiling, posters showing bomber attacks hung on the walls, and aeroplane books sat on the shelves. (7) An Air Defence League was set up. Every apartment building was asked to elect a house warden. They in turn assigned a fire detail, a hose crew, medical aides, and a dispatcher from among the residents. They formed the bottom of a pyramid linking house wardens to block wardens, district leaders, city-wide air raid officials, and so on up to Air Minister Goering. By January 1936 there were over 7,000 branches of the League with a total of over 8 million members.

These two examples show how a real thing—deadly gases—can be described so as to transform it into a blank screen for popular fantasies by emphasising its unprecedented nature, and this can form the basis for persuading people to support the extension of state power at the expense of their own civil liberties. How can we respond to these dangers? Alexis de Tocqueville warned that, in a modern liberal democracy in which each citizen finds themselves an atom in a sea of millions of other atoms, there is a strong tendency to identify with the state in times of danger. He argued that it is only through being a member of a civic association that citizens have the strength to call into question the state's use of real dangers to extend its powers and to assemble the scientific, legal, and other forms of expertise necessary to call into question the state's claims (Tocqueville 1968: 657–70, 872; Hirst 1994: 1–14).

Take Secretary for Defense William Cohen's claim, intended to gain American support for possible military action on Iraq. Appearing on ABC television's *This Week* in November 1997, Cohen held up a five-pound bag of sugar and stated, 'this amount of anthrax could be spread over a city, say, Washington, it could destroy half the population'. The ordinary American, or indeed world citizen, has no way of knowing how to assess Cohen's claim. Through joining a civic association, however, she can have access to biologists whom she trusts who can tell her, for example, that while it is relatively easy to produce anthrax it is very difficult to infect a large population (WHO 2001: s. 2.4), and to historians who can tell her that even a large state like Britain was not sure it had produced an effective biological weapon of mass destruction after a decade of trying (Balmer 2001: 128–30).

Thus, the saturation of the global space with the fear of terrorism to justify imperial expansion abroad and the rolling back of civil liberties at home can be challenged only through the creation of global civil society organisations and networks which can operate in many national spaces at once.

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Larrinaga and Turenne Sjolander 1998: 370). The international consideration of CB disarmament takes place within 'a world view where states are perceived to be the primary agent for analysis and action' (Carroll 2002: 23). As will be shown below, this environment impacts greatly upon civil society and its activities in CB disarmament.

Since the mid-1940s, CB weapons—along with nuclear weapons—have been framed as 'weapons of mass destruction' (WMD) by governments, international organisations, and civil society. The term originated with attempts within the United Nations to devise a 'system for the regulation of armaments' under Article 26 of the UN Charter. However, as noted above, major elements of the international regime against CB warfare pre-date the definition of CB weapons as WMD. The definition of WMD adopted by the United Nations mentions only 'lethal chemical and biological weapons', thus legitimising by default the range of CB weapons sometimes termed 'non-lethal' but which some regard as the bigger threat to international security.

The association of CB weapons with nuclear weapons has proved useful to Western states seeking to justify their continued possession of nuclear weapons (as a deterrent against the use of CB weapons by 'rogue states') and now to rationalise preventive action, and has also proved useful to legitimise the possession of CB weapons by states in the South as a deterrent against the nuclear powers or, in the case of the Middle East, as a counter to Israel's nuclear arsenal (Price 1995: 99–100; Croddy 2002: 46).

By equating CB weapons with nuclear weapons, the WMD discourse conceptualises them as a threat to the very survival of the state and therefore as an issue in which only states can legitimately be involved. Over the years, states have developed a generic approach to dealing with WMD based, in part, on concepts such as arms control and verification. This approach emphasises consensus-based multilateral treaty negotiation, oversight by an international organisation, and referral of violators to the United Nations Security Council. A distinct field of international law has been developed in which one international agreement borrows elements from

another so that treaty provisions are similar whether dealing with nuclear, biological, or chemical weapons.

Another characteristic of the WMD frame is that it is a product of the developed world; it lacks resonance with developing countries and their populations and with large sections of global civil society. For example: 'African civil society has not been active in the CBW arena at all. While there is interest in the issue, civil society organizations have naturally focused on more pressing and immediate issues including small arms proliferation and use, HIV/AIDS and food crises' (Gould 2003). At the state level, this is reflected in the fact that Africa has the lowest membership of any region

in the CWC and BWC despite the fact that chemical weapons have been used in a number of African countries and others are suspected of possessing either chemical or biological weapons. By not joining the CWC and BWC countries also limit their access to technology and to assistance if attacked or threatened with attack by CB weapons.

More recently, and particularly in the West, a third frame has been applied to CB weapons: CB terrorism. Although the threat of CB terrorism emanates from non-state actors possibly with state sponsorship,

once again it is the state which has responded and which has set the agenda. In many ways, the rise of CB terrorism is not a new framing of CB weapons; rather; it is a return to the ancient use of chemical or biological agents to terrorise, intimidate, and sabotage. The 2001 anthrax letters in the US caused a worldwide panic and national hysteria within the US but killed only five people.

In assessing the real threat posed by CB terrorism, it is worth recalling the resources expended by the US and USSR to develop effective biological weapons and that Aum Shinrikyo in Japan spent \$30 million on its chemical weapons programme (Smithson and Levy 2000: 80). Few terrorist organisations have such resources available. In addition, the ease of production and dissemination of CB weapons is frequently overstated by both the media and politicians. It is likely that terrorists will continue to prefer weapons with high levels of effectiveness and reliability, such as high explosives and small arms, rather than CB weapons which are difficult both to produce and to use. While international

By equating CB weapons with nuclear weapons, they are conceptualised as a threat to the very survival of the state and therefore as an issue in which only states can legitimately be involved

activity under the WMD frame has been based on multilateral solutions and international cooperation, the response to CB terrorism has been largely national and couched in terms of 'homeland security'. This is despite the threat posed by state-sponsored terrorism which may still require reliance upon more traditional solutions directed at states rather than non-state actors.

Since 11 September 2001, the response to CB weapons has been further re-framed, particularly in the US and UK, by the combination of the WMD and CB terrorism threats to produce a new 'nexus of proliferation and terrorism' (Ellis 2003: 117). Thus re-framed, responses to the issue of CB weapons are now as likely to involve military force as traditional diplomacy. In his 2002 State of the Union address, US President Bush spoke of an 'axis of evil' consisting of Iran, Iraq, North Korea, and 'their terrorist allies', and said: 'The United States of America will not permit the world's most dangerous regimes to threaten us with the world's most destructive weapons.' The clearest expression to date of this policy has been the recent US-UK invasion of Iraq, which was initially justified on the basis of disarming Iraq of its WMD. Both the US and UK governments made strenuous efforts to convince their populations of the threat posed by Iraq's alleged WMD stockpiles, a threat which, after the invasion, appears to have been overstated.

In dealing with CB warfare threats this view emphasises the national above the international, the military above the diplomatic, and unilateral action above multilateral consultations: 'The Bush administration's new national security strategy, aimed at refocusing US efforts to deal with proliferant states and nonstate actors, essentially replaces the traditional state-centered US nonproliferation approach with one that—for the first time—privileges counterproliferation and explicitly acknowledges prospective requirements for preemption' (Ellis 2003: 115).

Civil Society Involvement in Chemical and Biological Disarmament

The civil society involvement in CB disarmament provides a good example of an 'epistemic community', defined by Haas (1992: 3) as 'a network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area'. Epistemic communities are common in other areas of civil society. A study of civil society involvement in the negotiation of the 1996 Comprehensive Test Ban Treaty highlights the role of 'elite, principally non-governmental experts, academics and professionals' (Johnson 2000: 52), while a 'relatively small' epistemic community was initially involved in the tropical forest issue (Keck and Sikkink 1998: 134).

The difference between these two issue-areas and CB disarmament is that in both cases the epistemic community forms but a part of a broader civil society involvement in the issue made up of, in the case of the Comprehensive Test Ban Treaty negotiations, 'public movement campaigns' and 'non-violent direct action'. In contrast, civil society involvement in CB disarmament is largely limited to the members of the epistemic community. According to one observer of the BWC protocol negotiations: 'This was predominantly academic, research and policy analysis based nongovernmental participation; there was little of the traditional, grass roots NGO advocacy' (Rissanen 2002: 33). Using a definition applied to civil society organisations following corporate social responsibility, civil society in CB disarmament has many 'insiders' but few 'outsiders' (Oliviero and Simmons 2002: 82).

Civil society involvement in CB disarmament has a number of more specific defining characteristics which have a direct bearing on what activities are undertaken and how. The majority of the most active civil society organisations are based in the West, principally in North America and Western Europe, but there are of course some exceptions. They are

It is likely that terrorists will continue to prefer weapons with high levels of effectiveness and reliability, such as high explosives and small arms, rather than CB weapons

overwhelmingly based within academia and, even among those not in academia, academic qualifications are highly regarded. In very general terms, three main types of civil society organisation are most actively involved in CB disarmament: academic centres and programmes; scientific networks; and research and policy centres. There are of course overlaps between these three categories, and other organisations are involved in a more ad hoc fashion. While most of these organisations are national rather than international, they network and collaborate extensively with one another across borders.

Academic centres and programmes active within CB disarmament include the Harvard Sussex Program on CBW Armament and Arms Limitation (URL), the Department of Peace Studies at the University of Bradford (URL), and the Center for Nonproliferation Studies at the Monterey Institute for International Studies (URL). One observer has noted that the preponderance of academics within the community means that it includes 'people who don't know if they want to document or change the world' (Hammond 2003).

Reflecting the origins of civil society involvement in CB disarmament and the technical nature of the issue, there are many natural scientists, specifically chemists and biologists. The Pugwash Conferences on Science and World Affairs (URL) has been active in CB disarmament since the 1950s (see Box 5.4). Other scientific networks include the Federation of American Scientists (URL) and the International Network of Engineers and Scientists for Global Responsibility (URL).

Research and policy institutes include the Stockholm International Peace Research Institute (URL), the Chemical and Biological Arms Control Institute and the Verification Research, Training and Information Centre (URL). Green Cross International (URL) has done a lot to empower and bring together local communities in both the United States and Russia which are situated close to chemical weapons storage facilities.

Outside of this core group of civil society organisations are a number of organisations with a more irregular or less active involvement in CB disarmament. Among them are religious groups such

as the Quakers, humanitarian groups such as Amnesty International and Human Rights Watch, and environmental groups such as Greenpeace.

Mention should also be made of civil society organisations, particularly in the United States, which oppose elements of the international regime against CB warfare. For example, in 1991 the Heritage Foundation proposed the reversal of the US decision to renounce chemical weapons production and US retention of a modest biological weapons stockpile, while in 1997 the Center for Security Policy opposed US ratification of the CWC.

Three main types of civil society organisation are most actively involved in chemical and biological disarmament: academic centres and programmes, scientific networks, and research and policy centres

The interrelationship between CB weapons and the WMD frame imposed by governments upon them means that the community's boundaries can be easily discerned as few of its members participate in other issue-areas, even in nuclear disarmament. While this allows for subject specialisation, it also means that the community is somewhat insular and immune from developments in other issue-areas. All of these characteristics contribute to a community which is both discrete in its activities and restrained in its policy proposals. In this, it is similar to the epistemic community in nuclear disarmament which promotes 'limited, practical, incremental

demands and policy initiatives that are perceived by governments as pragmatic steps that can be realized in the short to medium term' (Johnson 2000: 50).

At the individual level, there is a remarkable degree of continuity among the community's members, with some participants having been involved in CB disarmament for over four decades. While this level of continuity brings great advantages in terms of subject-matter expertise and institutional memory, it can also make it more difficult for the community to renew itself through the recruitment of new members. The community is also a rather small one, similar to the 'handful of people' within the tropical forest epistemic community (Keck and Sikkink 1998: 134). According to the originators of the concept, an epistemic community typically has under 35 members and sometimes much fewer (Adler and Haas 1992: 380). It would not be surprising to find that the number

Box 5.4: The Pugwash movement and chemical and biological warfare

No account of the role of global civil society in CB disarmament would be complete without reference to the Pugwash Conferences on Science and World Affairs (Moore 1997). Pugwash grew out of the 1955 *Russell-Einstein Manifesto* and is so named because its first meeting was held in the village of Pugwash, Nova Scotia. Pugwash first held an international conference on CB warfare in 1959 and has been involved ever since. One account of Pugwash's work in this area says of the 1959 meeting: 'The meeting had no precedent; it was the first clear marker on the route towards the new international anti-CBW regime that exists today' (Robinson 1999: 230).

Pugwash's involvement in CB disarmament was subsequently taken forward by the BW Study Group and its successors. The various study groups have all had three elements: a steering committee, workshops, and policy research projects. Their meetings, of which there have been over 50 since 1964, are the primary forum for the presentation of new research, for airing new topics, and for increasing awareness of new developments. But perhaps their main function has been 'bringing policymakers and other governmental officials into continuing working contact with the Study Group' (Robinson 1999: 236).

The workshops have also served as a meeting place for global civil society allowing scientists, researchers, analysts, and NGO staff to build up relationships, discuss issues, and share ideas. All participants take part in the workshops as individuals rather than as representatives of their governments or organisations, thus providing for more informal, and frequently more revealing, discussions.

At various times in its history, the Study Group has conducted, or been closely associated with, policy research projects. These have often occurred at times of low governmental activity on CB disarmament. In the mid-1960s, the Study Group, in collaboration with the Stockholm International Peace Research Institute (SIPRI), itself largely a creation, through the Swedish parliament, of Pugwash, undertook a project to assess the feasibility of international inspections to biological laboratories. Although the BWC as opened for signature in 1972 did not include any serious verification measures, the work done by SIPRI did feed into later intergovernmental negotiations.

In the 1970s, the Study Group did work on the philosophy and design of on-site inspections in the civil chemical industry, including a number of trial inspection visits. Through this work, Pugwash facilitated contacts between the diplomats in Geneva and the civil chemical industry, which were essential to the eventual success of the CWC negotiations. This approach was emulated by governments with the use of national trial inspections during both the CWC and BWC protocol negotiations.

The story of Pugwash involvement in CB disarmament is also the story of the involvement of particular individuals, some for many decades. Chief among them is Martin Kaplan, who was the instigator of the 1959 meeting and has played a leadership role in Pugwash work in this area ever since (Robinson 1999: 230). In the early 1950s, Kaplan was a WHO microbiologist already concerned about CB weapons. He attended a Pugwash conference in 1958 and was then involved in planning the 1959 meeting. Kaplan went on to become Secretary-General of Pugwash from 1976 to 1988 (Kaplan 1999). Alongside Kaplan, Matthew Meselson from Harvard University and Julian Perry Robinson from the University of Sussex have been closely involved in the Study Group since the 1960s. Indeed, Meselson, through his Harvard colleague Henry Kissinger, then President Nixon's National Security Adviser, had much to do with the US renunciation of biological weapons in 1969–70 (Kaplan 1999: 151).

Assessing the influence of Pugwash in CB disarmament is not easy due primarily to a lack of documentation. It chiefly resides in the continuity of its involvement, the informal nature of its workshops, and the originality of its policy research. Between 1959 and 1998, 645 people from 46 countries had participated in Pugwash activity in this field: a 'remarkable community of interest', as one account describes it (Robinson 1999: 245). This same account concludes that 'perhaps the greatest achievement of Pugwash [at the level of government] has been its role in gradually securing respectability for the goal of an international treaty on chemical weapons. This was a goal which, in the late 1960s, government officials in the more prominent Western countries would often simply mock'.

of individuals actively involved in CB disarmament is somewhat similar.

In terms of organisations involved, the most recent CWC and BWC meetings were attended by, respectively, only 6 and 16 civil society organisations, compared with the 62 which attended the 2002 Non-Proliferation Treaty Preparatory Committee. One advantage of this small size is the ease of communication and collaboration among the community. Members are in frequent contact by e-mail and telephone and meetings such as those organised by Pugwash often involve a large proportion of the community.

The community is also well-connected in terms of its relationship with governments and international organisations. The long-term involvement of some community members means that they have developed strong personal contacts with government officials. Additionally, some individuals now active for civil society in CB disarmament were previously responsible for the issue-area as government officials or diplomats, thus further strengthening the contacts between global civil society and policy-makers. While this may provide civil society with a better understanding of how decisions are made, it also contributes to the discrete and restrained character of civil society involvement in CB disarmament and it further reinforces the process-minded, state-centric approach to CB disarmament.

Since the early 1990s, there have been remarkable developments in civil society both in terms of the number and diversity of organisations and individuals involved and in terms of the activities undertaken. Even in the disarmament field, civil society has demonstrated that it can undermine the 'state security discourse' and make a role for itself, as it did most successfully in the negotiations for the 1997 Mine Ban Convention.

It might be expected that these developments would have impacted on civil society in CB disarmament but, until recently, there had been little evidence of 'spillover'. Throughout the 1990s, the community changed little, it remained highly specialised and academic, operating mainly through

technical publications and discrete communications with government officials and diplomats. However, there are recent indications that developments elsewhere in global civil society are beginning to filter through.

A relative newcomer to CB disarmament, the Sunshine Project (URL), has been instrumental in introducing new thinking to the existing civil society actors. In contrast to the individuals traditionally involved in CB disarmament, the Project's staff have backgrounds in public advocacy and grass-roots networking. While utilising traditional civil society tools, such as the resolution supporting the BWC protocol handed to the ad hoc group chairman in April 2001, the Sunshine Project has also attempted to re-frame CB disarmament so that it resonates more widely. In particular, the Project has emphasised the relevance of biodiversity and biosafety, areas of great civil society activity, to CB disarmament. In so doing, it has brought the issue to a whole new audience, thus broadening the traditional CB disarmament community.

The collapse of the BWC protocol negotiations and the success of *Landmine Monitor* encouraged the establishment of the BioWeapons Prevention Project (URL) to undertake a similar global monitoring role for the BWC. The Project was launched in November 2002 and is currently still in its start-up phase. Funds have been pledged by a number of sympathetic governments and two have already contributed. The Project aims to improve global monitoring of BWC compliance by empowering civil society nationally, raising public awareness, and publishing an annual *BioWeapons Monitor* which it hopes will emulate the success of *Landmine Monitor* in monitoring national compliance with the 1997 Mine Ban Convention. The Project is specifically intended to create a network encompassing sections of global civil society which have not previously been active in CB disarmament. The network already includes civil society organisations from Europe, North America, and Africa.

Throughout the 1990s, the community changed little, it remained highly specialised and academic, operating mainly through technical publications and discrete communications with government officials and diplomats

External Factors: Access and Funding

The main external factor influencing civil society in CB disarmament is the 'state security discourse' and the framing of CB weapons as WMD and as potential terrorist weapons. This shapes the environment in which civil society operates in CB disarmament and influences its character and activities. However, at least two other factors also matter, namely, the degree of access granted to CB disarmament processes and the availability of funding for activities; while a third, the indirect influence of developments in other sections of global civil society, may be becoming more important.

One study has found that the formal access of civil society in international disarmament forums is 'almost invariably at the lower end of the spectrum' (Carroll 2002: 21). Access matters because without it civil society is less aware of the issues at stake in a conference or negotiation and has to rely on other sources of information, invariably the participating diplomats themselves who do not always have an interest in providing a balanced account. Without access, civil society is little more than a disenfranchised observer able to listen to bland political statements but kept away from the real debate. Of course, access is not all-important: '[A]n exclusive focus on the question of the relative lack of formal NGO "access" to multilateral disarmament badly distorts the reality of the many important roles that NGOs can and do play in disarmament affairs' (Atwood 2002: 9).

Accredited civil society organisations have access only to the opening and closing plenary sessions of the annual CWC conferences, the BWC ad hoc group, and the respective review conferences. They cannot attend sessions of the subsidiary bodies where the main debates occur. Documentation available does not include draft decisions or working papers, and documents submitted by civil society are not distributed as official documents. They are also provided with no or very minimal office facilities. Civil society organizations were allowed to address informal sessions of the fourth and fifth BWC Review Conferences and a half-day 'Open Forum' took place parallel to the first CWC Review Conference.

The formal access
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However, this level of access compares poorly to that now granted to civil society in other areas, particularly human rights and the environment, but even in nuclear disarmament. At the Nuclear Non-Proliferation Treaty Preparatory Committee in 2002, civil society presentations were heard during a formal session for the first time. In contrast, during the Preparatory Committee for the fifth BWC Review Conference, Mexico's proposal, that 'in order to keep pace with practice regarding NGOs in other multilateral fora' civil society be allowed to submit material orally and in writing, was not adopted (Pearson 2001: 18). Those civil society organisations present submitted a note to the chairman which included the following: '[W]e would like to be present as observers in all sessions as we would thereby become much more aware of the real issues—rather than just the fixes in Plenary. We are, however, realists and recognize that evolutionary progress is the way forward.' However, there was no 'evolutionary progress' at the conference and, in

retrospect, the note looks timid and reactive. In the future, civil society will have to cooperate proactively with sympathetic states like Mexico in order to gain greater access.

Civil society compensates for its lack of formal access to meetings in CB disarmament through its good connections with diplomats, whether at the meetings or nationally. Some states actually go out of their way to keep civil society informed and involved in ways other than observing meetings, ways which are sometimes of more mutual benefit. For example, under an initiative begun by the French presidency of the European Union in 2000, successive presidencies hosted lunchtime meetings between European Union diplomats and civil society organisations during sessions of the BWC ad hoc group.

A practice which has only rarely been transferred to CB disarmament is the inclusion of non-governmental experts on state delegations, although it is common practice among some Non-Proliferation Treaty states parties. Proposals for improved access in nuclear disarmament apply equally to CB disarmament: 'Effectiveness could be enhanced by opening working sessions of negotiations to NGOs, and in particular allowing NGOs not only to observe from a

distance but to work with diplomats on the floor, making NGO access comparable to that enjoyed in the human rights and environmental fields' (Burroughs and Cabasso 1999: 476).

The large bulk of funding for civil society in CB disarmament comes from a small number of mainly American private foundations including the MacArthur Foundation, the Ford Foundation, the Carnegie Corporation, and the Ploughshares Fund, as well as, in the UK, the Joseph Rowntree Charitable Trust, which have long supported progressive thinking on international security. As with all sections of civil society, the actors concerned with CB disarmament have long struggled for funds and survived on an insecure financial footing.

In the 1990s, three factors made this situation even worse. The end of the Cold War and the dissolution of the USSR encouraged some foundations to 'declare victory' and reorient their funding priorities away from security issues towards issues more 'relevant' in the post-Cold War world (Bernauer 2001: 631). Another consequence of the Cold War's end was the increased complexity of the international security field, now incorporating a plethora of new groups seeking funding on topics such as small arms, landmines, conflict resolution, and peacekeeping. Also during the 1990s, the successful negotiation of treaties such as the CWC and the Comprehensive Test Ban Treaty and the indefinite extension of the Non-Proliferation Treaty convinced other foundations that the important work had been done. Taken together, these three factors contributed to a huge reduction in the number of foundations making grants in international security. From more than 75 foundations making grants in the international security field in 1984, the number dropped to 25 by 1994 (Wallerstein 2002: 86).

Organisations working in CB disarmament fared particularly badly because, according to one foundation official, 'there has been a natural reluctance to abandon or reduce the scope of [work on nuclear reductions] in order to divert resources to other, more contemporary threats, such as biological weapons' (Wallerstein 2002: 85). Funding constraints limit the activities which civil society can undertake and also restrict the entry of new talent into CB disarmament, precisely at a time of generational change when new entrants are much needed.

The International Response to Chemical and Biological Weapons

The international community identified CB weapons as being separate from other weapons at an early stage. A United Nations (1969: 1) report states: 'No form of warfare has been more condemned than has the use of this category of weapons.' Much effort, particularly from the mid-1960s, has been made to develop rules and practices among states which reinforce the notion that the use of CB weapons should be limited, if not banned entirely. Over the years, CB disarmament has developed an architecture of principles, norms, rules, and procedures which can aptly be described as an international regime (Krasner 1983: 2).

In 1918, the International Committee of the Red Cross protested against the use of chemical weapons, describing it as 'criminal'

The 1900s: The Hague Peace Conferences

The codification of the norm into international law actually began over a century before the negotiation of the first major CB disarmament treaty. The 1874 *International Declaration Concerning the Laws and Customs of War* especially forbids the 'employment of poison

or poisoned weapons'. Although the 1874 declaration never entered into force, its prohibition of poison or poisoned weapons was taken up in the 1899 *Regulations Respecting the Laws and Customs of War on Land* signed in The Hague along with Declaration IV.2 under which the contracting parties agreed to 'abstain from the use of projectiles the object of which is the diffusion of asphyxiating or deleterious gases'. Study of the papers of the 1874 conference shows that the reference to poison and poisoned weapons in the declaration included the spreading of disease, an interpretation which was adopted without discussion in The Hague (SIPRI 1973b: 96).

The 1910s and 1920s: The First World War and the Geneva Protocol

Although chemical weapons were massively used during the First World War, it was widely accepted

that these prohibitions had entered international customary law. All belligerents went to great efforts to deny that their own actions were in contravention of the treaties while at the same time demonising their opponents for their use of chemical weapons. In 1918, the International Committee of the Red Cross protested against the use of chemical weapons, describing it as 'criminal' (ICRC 1918).

After the war, the next significant milestone in the development of the international regime against CB warfare was the 1925 Geneva Protocol, which acknowledged the existing norm against the use of chemical weapons: 'Whereas the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices, *has been* justly condemned by the general opinion of the civilised world . . .' (emphasis added). The Protocol also codified the extension of the prohibition to include biological weapons.

The negotiation of the Geneva Protocol took place in an atmosphere of intense public opposition to chemical weapons created in part by counterproductive claims from chemical weapons proponents about supposed new 'super' weapons. (See Box 5.4). According to one account: 'From their initial mobilization at the hands of publicists and lobbyists, popular attitudes towards CBW throughout much of Europe and America were concerted in their hostility. As they gathered strength in the early 1920s, they had the effect of stimulating and sustaining international efforts to abolish CBW' (SIPRI 1971b: 263).

The 1960s: The Vietnam War and the Biological Weapons Convention

CB weapons returned to the international political agenda only in the mid-1960s, prompted by the use of chemical weapons in the Yemeni civil war, by concerns expressed publicly by eminent scientists, but mostly by the use of toxic chemicals by the US in Vietnam. The situation in Vietnam and the public attention it was attracting inspired the United Nations General Assembly to adopt a resolution on CB warfare in 1966 which led to the inclusion of CB weapons in the agenda of the Geneva disarmament conference.

Public attention to CB weapons was heightened by two authoritative reports: one, by a group of

experts appointed by the United Nations Secretary-General, induced the other, by a World Health Organization group of consultants. The authors of the UN report hoped it would 'contribute to public awareness of the profoundly dangerous results if these weapons were ever used and that an aroused public will demand and receive assurances that Governments are working for the earliest effective elimination of chemical and bacteriological (biological) weapons' (United Nations 1969: 88).

By 1968, the prohibition of CB warfare was 'generally considered one of the most urgent measures to be taken up following the conclusion of the Treaty on the Non-Proliferation of Nuclear Weapons' (SIPRI 1971a: 253). In the US, 22 prominent scientists and doctors (including 7 Nobel laureates), supported by 5,000 scientists, sent a petition to President Johnson. In other countries, revelations by journalists and protests by students also raised popular awareness (Sigmund 1980). In the UK, one of the main activists identified 'the need for a grass-roots movement' (Sigmund 1980: 7). Gradually, many states also came to the conclusion that the international regime against CB warfare was in need of strengthening. CB weapons were under consideration together by the Geneva disarmament conference but a ban on chemical weapons seemed far off.

In 1968, the UK therefore proposed that the issues be separated and introduced a draft convention on biological weapons. Many states initially opposed the separation, but political momentum was provided in 1969 when President Nixon announced the US renunciation of biological weapons (also partly inspired by opposition to the Vietnam war) and its support for the UK draft, and in 1971 when the USSR and its allies reversed their earlier opposition to separation. The subsequent negotiations led to the 1972 BWC prohibiting the development, production, and stockpiling of biological weapons and requiring the destruction of any existing stocks. The BWC was thus the first international disarmament treaty to outlaw an entire class of WMD. One of the authors of the WHO report wrote later that it and the report by the Secretary-General's expert group 'were influential in achieving the Biological Weapons Convention of 1972' (Kaplan 1999: 151).

Article IX of the BWC required that states parties undertake 'to continue negotiations in good faith with

In 1972, the Biological Weapons Convention was the first treaty to outlaw an entire class of weapons of mass destruction



Signing ceremony for the Chemical Weapons Convention. © Organisation for the Prohibition of Chemical Weapons.

a view to reaching early agreement on effective measures' for the prohibition of chemical weapons. However, the issue remained on the agenda for another 20 years until an even more comprehensive agreement prohibiting the development, production, stockpiling, and use of chemical weapons was eventually finalised.

The 1980s: The Iran–Iraq war and the Chemical Weapons Convention

During the 1980s, there was 'a widespread sense that the existing regime of international law and custom which inhibited resort to toxic warfare was coming under increasing threat, and that it might well prove to be in the best interests of all states if the regime, symbolised by the Geneva Protocol of 1925, were somehow strengthened' (Robinson 1993: 37). In Western Europe, scientists and peace activists joined together to protest against the possibility of new US 'binary' chemical weapons being deployed. In the UK, over 2,000 scientists signed a petition in 1981 against the new weapons (Murphy, Hay, and Rose 1984: ix). The UK Scientists' Campaign and its associated Working Party on Chemical and Biological Warfare was intended to emulate civil society opposition to the stationing of new US nuclear

missiles in Europe led by European Nuclear Disarmament (Murphy, Hay, and Rose 1984: 107).

Political and public interest in the CWC negotiations increased when Iraqi use of chemical weapons was confirmed by the United Nations in 1984 and in subsequent years (see Box 5.5). Press reports of the attacks and the transfer of some of the victims to hospitals in Western Europe increased public awareness of chemical weapons, although political condemnation of Iraq was less forthcoming as major Western countries were supporting Iraq in the ongoing war. The 1989 Paris Conference on the Prohibition of Chemical Weapons referred only to 'recent violations' of the 1925 Geneva Protocol without mentioning Iraq by name.

Key political events in the negotiation of the CWC during the 1980s included the introduction in 1984 of a new US draft chemical weapons convention, the acceptance by the USSR in 1987 of the intrusive verification provisions proposed by the US, and the announcement in 1989 of a more flexible US negotiating position. A number of factors contributed to the finalisation of the 1993 CWC:

First, the end of the cold war increased mutual trust and confidence among states. Other positive factors included changes in the US negotiating position, the

Box 5.5: Halabja: The chemical weapons campaign against the Kurds

The Iran–Iraq war of 1980–8 was the most recent war to see the widespread use of lethal chemical weapons. It appears that Iraqi forces had begun to use chemical weapons against Iranian troops by 1983 or even earlier. In 1984, a UN investigation team confirmed the use of mustard gas and the nerve agent tabun in the war, without stating which side had used them. In 1986, however, another investigation stated specifically that 'on many occasions, Iraqi forces have used chemical weapons against Iranian forces'. In 1987, a further investigation reported that 'a new dimension is that civilians in Iran have also been injured by chemical weapons'. According to Iranian figures, an estimated 100,000 military personnel and civilians were exposed to chemical weapons during the war, of whom 3,500 died during the war. Even now, many years after the end of the war, over 34,000 victims are still being treated for the long-term effects of exposure to mustard gas.

The attack on the Iranian city of Sardasht in June 1987 set a precedent for the widespread use of chemical weapons against civilians by Iraq as part of its campaign against its own Kurdish population. Human Rights Watch (1995) has described the Iraqi Anfal campaign against the Kurds as genocide and has published a detailed account of events. The use of chemical weapons against Kurdish villages appears to have begun in 1987 but intensified in 1988. The most well-known incident was the attack on the border town of Halabja, but Human Rights Watch records attacks on over 60 villages.

During the afternoon of 16 March 1988, Iraqi aircraft dropped mustard gas and nerve agents on Halabja. Based on interviews with survivors, Human Rights Watch describes the scene as follows:

In the shelters, there was immediate panic and claustrophobia. Some tried to plug the cracks around the entrance with damp towels, or pressed wet cloths to their faces, or set fires. But in the end they had no alternative but to emerge into the streets. It was growing dark and there were no streetlights; the power had been knocked out the day before by

artillery fire. In the dim light, the people of Halabja could see nightmarish scenes. Dead bodies—human and animal—littered the streets, huddled in doorways, slumped over the steering wheels of their cars. Survivors stumbled around, laughing hysterically, before collapsing. Iranian soldiers flitted through the darkened streets, dressed in protective clothing, their faces concealed by gas masks. Those who fled could barely see, and felt a sensation 'like needles in the eyes.' Their urine was streaked with blood.

Refugees from Halabja fled to Iran where survivors of the attack were treated. A few days after the attacks, Iran allowed journalists to visit the town. The pictures which they took were seen around the world and clearly showed that most of the dead had been Kurdish civilians. The number of dead has been estimated at around 5,500 but could have been much higher. Every year on 16 March Halabja Day is marked in Iraqi Kurdistan and in countries around the world with remembrance ceremonies, political statements and appeals for more assistance for the victims.

In the years since the attack on Halabja, the victims have received little in the way of international attention. What assistance they have received has been due in large measure to academics and researchers in the West collaborating with Kurdish doctors in Iraq. The Washington Kurdish Institute has organised a series of international meetings in recent years to raise awareness of the suffering of the people of Halabja.

A postgraduate medical institute has been established in Halabja with international assistance. Staff of the institute have carried out a medical survey of Iraqi Kurdistan which has found that rates of congenital abnormalities are four to five times those suffered by victims of the atomic bomb attack on Hiroshima and that cancer rates are four times the Middle East average. The researchers have also identified 281 sites throughout northern Iraq where Iraqi forces used chemical weapons.

collapse of the Soviet Union, the outcome of the 1991 Persian Gulf War (which clearly demonstrated that chemical weapons are no longer politically desirable), and not least the clear political will of the majority of states to totally prohibit chemical weapons. (Robinson, Stock, and Sutherland 1994: 705)

The negotiation of the CWC, particularly as it entered its end-game, attracted high-level political attention from the likes of Australian Foreign Minister Gareth Evans and US Vice-President George H. W. Bush. Thanks in part to the efforts of civil society, the chemical industry actively followed the negotiations and was largely supportive of the CWC.

The CWC represents a significant consolidation of the international regime against CB warfare with the creation of a verification system of unprecedented intrusiveness overseen by a new international organisation. The CWC has already served as a model for the 1996 Comprehensive Test Ban Treaty and the failed BWC Protocol (see Box 5.5) and will doubtless act as a precedent for future developments within international law.

The 1990s and 2000s: The ICC Statute and the BWC Protocol

The negotiation of the 1998 Statute of the International Criminal Court (ICC) represented a missed opportunity for strengthening the international regime against CB warfare. The draft statute included four options for defining what weapons were to be criminalised, two of which expressly prohibited both chemical and biological weapons. In negotiating the Statute, states agreed that the war crimes over which jurisdiction was to be established should go no further than existing customary international law. With respect to CB warfare, this meant that they should reflect the Hague Conventions and the Geneva Protocol but not the more recent BWC and CWC, which are not regarded as having entered customary law. However, other parts of the Statute are more progressive about what constitutes customary law, above all the gender provisions.

As the result of political horse-trading in the closing days of the negotiations, the Statute criminalises the use of 'asphyxiating, poisonous or

other gases and all analogous liquids, materials or devices' and the employment of 'poison or poisoned weapons' (Burroughs and Cabasso 1999: 471–2). So, while the use of chemical weapons is criminalised, no direct reference to biological weapons is made. Some have argued that the Statute could be interpreted as also applying to biological weapons (Burroughs and Cabasso 1999: 472), but the UK government recently stated: 'The use of biological weapons is not specifically a crime under the ICC Statute at present' (United Kingdom 2002: Ev. 24).

The explicit reference to biological weapons in earlier drafts was dropped under pressure from Arab states: 'Some states argued that, if nuclear weapons were not expressly included, then biological and chemical weapons, "poor man's weapons", ought not to be included either' (Glasius 2002: 158).

It is also not clear whether the Statute criminalises the use of 'non-lethal' chemical weapons in warfare. However, later elaboration of the Elements of Crimes saw the inclusion of a footnote stating: 'Nothing in this element shall be interpreted as limiting or prejudicing in any way existing or developing rules of international law with respect to development, production, stockpiling and use of chemical weapons' (United Nations 1999: 25).

The reference to 'existing or developing rules of international law' implies recognition of the provisions of the Geneva Protocol and the CWC relating to 'non-lethal' chemical weapons. In fact, this footnote was the result of discrete pressure from civil society.

Few if any of the civil society actors in CB disarmament paid much attention to the negotiation of the ICC Statute and none were in Rome for the final negotiations. The disarmament organisations present in Rome were overwhelming concerned with nuclear weapons; as they had not been sensitised to the importance of the explicit inclusion of biological weapons, they did not lobby on the issue. However, the Statute as adopted is a lot more ambiguous on this point than if biological weapons had been expressly included, and an opportunity to further codify the norm against CB warfare was missed.

The 1999 Hague Appeal for Peace gathering to celebrate the centenary of the Hague peace

Few civil society actors in CB disarmament paid much attention to the negotiation of the ICC Statute, and an opportunity to further codify the norm against CB warfare was missed

conference represented an opportunity for raising civil society awareness of CB weapons. However, alongside the many panels on nuclear disarmament and small arms, only two were devoted to CB weapons. The resultant *Hague Agenda for Peace and Justice* included just one paragraph on CB weapons. Similarly, the peace, security, and disarmament strand of the Millennium Forum in 2000 made no mention of chemical weapons and lumped discussion of biological weapons in with a number of other issues. While this might be the result of ignorance on the part of the event organisers, it probably also reflects the isolation of civil society in CB disarmament from other sections of global civil society.

The 25th anniversary of the entry into force of the BWC and the 75th anniversary of the adoption of the Geneva Protocol both fell in 2000 and the events could have been used to draw much-deserved attention to the treaties. In the event, the BWC anniversary was marked by specialist workshops in New York and Geneva and the Geneva Protocol anniversary by written statements from Presidents Clinton and Putin. Lacking, however, was any attempt by civil society to sensitise a wider audience to the significance of these treaties or indeed to launch a coordinated campaign to encourage states to ratify them.

The end-game of the negotiations to draft a supplemental protocol to strengthen the BWC took place in 2001 (see Box 5.6). From 1995, civil society had focused on influencing the negotiations through publications and meetings but had failed to promote the importance of the protocol to wider global civil society, had not sensitised the media to the issue, and was unable to mobilise the general public. One assessment of civil society's role describes it as 'successful in shaping the verification protocol and prodding it along, yet unable to engender sufficiently broad civil society interest when the rubber hit the road and intense politics were in order' (Hammond 2003).

Global Civil Society Activities in Chemical and Biological Disarmament

Given the characteristics of civil society involvement in CB disarmament and the 'state security discourse' within which it operates, the range of activities undertaken is limited compared with other issue-areas and takes as its target audience state representatives. One study of civil society activity in international negotiations has identified seven types of activity: problem definition, agenda setting and goal setting; enforcement of principles and norms; provision of information and expertise; public advocacy and mobilisation; lobbying; direct participation in the formulation of international agreements; and monitoring and other assistance with compliance (Albin 1999: 378).

Unlike in other areas of global civil society activity, in CB disarmament there has been little space for any actors other than governments to play a role in agenda-setting

Problem definition, agenda setting, and goal setting

Unlike other areas of global civil society activity, in CB disarmament there has been little space for any actors other than governments to play a role in agenda-setting.

Whereas the International Coalition to Ban Landmines was able to re-frame antipersonnel landmines from a purely military to a wider humanitarian and societal issue (Short 1999: 496), in CB disarmament global civil society has to operate within the 'state security discourse' and has largely had to react to an agenda set by governments, specifically an agenda dominated by WMD and lately by CB terrorism. 'Compared with agenda-setting processes in international trade, human rights, or environmental policy, nongovernmental actors have been only very indirectly involved in identifying and framing problems and possible solutions' (Bernauer 2001: 630).

The 'state security discourse' means that governments do 'not like having civil society involved in national security issues' (Johnson 2000: 49). One way in which governments operationalise this dislike is by allowing civil society little or no access to the agenda-setting process in CB disarmament when compared with other issue-areas. In the 1960s, civil society in the shape of Pugwash did achieve a degree

Box 5.6: The Biological Weapons Convention Verification Protocol

The BWC which was eventually approved by the Geneva disarmament conference in 1971 was a much diluted version of the original UK draft treaty introduced three years earlier (Sims 2001: 24). Most significantly, it lacked any of the functional substitutes for verification included in the UK draft. From its very birth, therefore, some felt that the BWC was in need of strengthening. At each of the subsequent five-yearly review conferences, various states parties have spoken in favour of strengthening the BWC, with verification having been discussed since 1986 (Sims 2001: 83).

The 1991 review conference established an ad hoc group of governmental experts 'to identify and examine potential verification measures from a scientific and technical standpoint'. A special conference in 1994 created an ad hoc group 'to consider appropriate measures, including possible verification measures, and draft proposals to strengthen the Convention, to be included, as appropriate, in a legally binding instrument'. Between 1995 and 2001, the ad hoc group drafted a detailed 'verification protocol' intended to supplement, but not replace, the original BWC.

This protocol, like the CWC upon which it was largely modelled, was built upon three verification 'pillars', namely, national declarations, visits by international inspectors to declared facilities, and investigations in cases of suspected violations. Implementation of the protocol would have been overseen by a new international organisation (Feakes 2001). The negotiations proceeded slowly with deadlines for completion being set and then missed. The European Union and others such as Australia, Canada, and South Africa were strongly supportive of

the protocol. While many non-aligned countries did not participate actively in the negotiations, a group including Pakistan, Iran, India, and Cuba actively opposed further restrictions on technology transfers, setting them in opposition to Western countries keen to strengthen export controls.

A largely unknown quantity in the negotiations was the US. The Clinton Administration's acceptance of the ad hoc group process was a reversal of previous US policy, which had considered the BWC to be 'unverifiable' but did not represent a whole-hearted commitment to verification (Sims 2001: 108). However, throughout the negotiations the US was a relatively passive participant, many officials from the previous administration remained in post, and President Clinton never gave much-needed political direction to the lower-level officials.

Civil society was represented by a small number of academics and researchers who followed the negotiations as best they could given their limited access to the meetings. They produced reports of the negotiations for a wider audience and also technical reports aimed at the diplomats participating in the negotiations (Rissanen 2002: 33).

The chairman of the negotiations released his draft of the verification protocol in March 2001, a few months after President Bush assumed office. While he urged civil society to support the protocol and pressure governments to do likewise, the issue lacked profile and the small group of academics and researchers who had been following the negotiations lacked the means and constituency to organise a large campaign. In addition, there were splits among this group with some arguing that the draft protocol did not go far enough but most that it was 'better than

of success in shaping the international agenda on CB warfare, but this was before the agenda became dominated by concerns of WMD and CB terrorism.

Enforcement of principles and norms

Civil society has been more active in CB disarmament with regard to the normative area aided by the fact that the taboo against CB warfare is so long-standing

and widely accepted and that disarmament treaties are in force. These treaties 'establish standards against which transnational civil society can, and does, loudly and publicly compare the actual behavior of states and corporations' (Florini 2000: 225). One example of this is the role played by civil society in upholding the broad definitions of CB weapons used in the CWC and BWC, otherwise known as the 'general purpose criteria' (Tuerlings and Robinson 1999). Given the

nothing'. During early 2001, the Bush Administration conducted an internal review of the protocol. This was the time of greatest (but still limited) non-governmental pressure within the US joined also by diplomatic pressure from Washington's European allies. However, leaks to the press made it very clear that the protocol lacked strong supporters within the new administration (Feakes and Littlewood 2002).

With the November 2001 deadline for completion of the protocol negotiations fast approaching, BWC states parties met in July in Geneva to give their opinions on the protocol. On the first two days, over 50 states spoke in support of the chairman's efforts. However, in its statement the US announced not only its rejection of the protocol as drafted, but also its rejection of the entire approach taken by the ad hoc group since 1995 (Chevrier 2001). Unlike in other treaty negotiations the idea of continuing without the US was never seriously considered by the ad hoc group despite being mentioned by some delegates and non-governmental experts. A number of different reasons have since been given. The ad hoc group always operated on the basis of consensus and the US could have blocked adoption of the protocol. Without the US, the protocol would not apply to the world's largest biotech and pharmaceutical industry, thus disadvantaging competitors in countries which did join. It was also argued that the absence of the US would create a domino effect, with other countries also deciding to stay out.

Paradoxically, it was only with the rejection of the protocol by the US that the issue achieved a higher public profile and many of the academics and researchers who had been following the negotiations were interviewed on television news programmes

and in newspapers. The issue was also raised by parliamentarians in a number of countries. Despite the early warnings, there was little that could be done to prevent the US rejection of the protocol or to pressure other governments to continue without the US. After the US announced its rejection, '[t]he NGOs came together and launched a "counter-offensive", trying to rally public and governmental support for the Protocol. They contacted members of their respective parliaments and wrote op-eds and letters to the editor in newspapers and magazines, trying to enhance greater domestic interest in and support for the Protocol' (Rissanen 2002). However, this reactive approach was really too little too late, and it ultimately failed.

However, the protocol soon faded from public attention and is remembered now, if at all, in the wider world as just one in a series of international treaties rejected by the new Bush Administration.

The US rejection of the BWC protocol had already soured the atmosphere prior to the November 2001 review conference. However, the situation worsened further when the US tabled a last-minute proposal to terminate the mandate of the ad hoc group. No other country could accept this and the conference was therefore suspended for a one-year cooling-off period. As states parties reconvened in Geneva in November 2002, expectations of a successful outcome were low. In the end, a minimal action plan for the period up until the 2006 review conference was adopted involving annual meetings on specific topics. With the first meeting scheduled for August 2003, the value of this so-called new process cannot yet be ascertained.

preponderance of scientists within the CB disarmament community, much attention has been paid to the ethics of chemical, and particularly biological, research.

As in other areas of international humanitarian law, the International Committee of the Red Cross has played its traditional normative role in CB disarmament. In 2002, it launched an appeal on *Biotechnology, Weapons and Humanity*, which called on 'all political

and military authorities to strengthen their commitment to the international humanitarian law norms which prohibit the hostile uses of biological agents and to work together to subject potentially dangerous biotechnology to effective controls' and also on 'the scientific and medical communities, industry and civil society in general to ensure that potentially dangerous biological knowledge and agents be subject to effective controls' (ICRC 2002).

Provision of information and expertise

The primary activity for civil society in CB disarmament is the provision of information and expertise. This reflects the academic backgrounds of many of the individuals involved. For them, written publications and the provision of expertise are more highly valued than participation in public advocacy or mobilisation. There are four target audiences: policy-makers and diplomats; other global civil society actors; the media; and the general public.

The vast majority of the civil society actors in CB disarmament see policy-makers in national capitals and diplomats involved in negotiations as their primary audience. During the BWC protocol negotiations, the University of Bradford Department of Peace Studies produced a series of 33 briefing papers and 22 evaluation papers for the diplomats involved (Pearson 2002: 3). One diplomat wrote later that the negotiations 'received an important political and substantive impetus by discussions in and publications emanating from academic and scientific circles and the NGO-community' (Kervers 2002: 278). Civil society also provides information and expertise to governments through service on advisory bodies such as the CWC National Authority Advisory Committee in the UK and the Biological and Chemical Defence Review Committee in Canada.

Other publications provide information to fellow civil society actors in CB disarmament. For example, the quarterly *CBW Conventions Bulletin* contains the only publicly available account of developments within the Organization for the Prohibition of Chemical Weapons in addition to a chronology of recent CB warfare-related events and a bibliography of relevant publications. While undertaking and publishing its own research, the Sunshine Project has also established an on-line clearing house of official US documents declassified under the Freedom of Information Act, thereby allowing others to use them in their own research (Sunshine Project 2003). In addition, professional or membership-based organisations such as the World Medical Association or the British Medical Association have disseminated information to their members, drawing their attention to CB disarmament issues.

**By and large the CB
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While the media are some of the primary consumers of CB disarmament information and expertise, the relationship is a relatively reactive one from the point of view of the experts. Civil society actors in CB disarmament do not spend a lot of time proactively sensitising the media to particular issues, but they do spend time responding to questions from journalists and reacting to events. The passive approach was illustrated recently when, although many experts doubted that Iraq possessed a stockpile of CB weapons worth going to war for, few of them proactively sought opportunities to promote their opinion. An example of a proactive approach from civil society was the briefing packs prepared for the media on the BWC protocol by the International Security Information Service (URL) in the UK.

Occasionally, civil society actors involved in CB disarmament write for a wider audience, particularly in an attempt to explain a complex issue and to play down the often exaggerated threat portrayed by the media (Murphy, Hay, and Rose 1984; Croddy 2002). In 2001, the British American Security Information Council published a guide to BW intended for non-specialists (Crowley 2001) and a shorter information pamphlet. The pamphlet summarised the main concerns about BW and advocated the completion of the BWC protocol negotiations.

Public advocacy and mobilisation

It is with public advocacy and mobilisation that civil society has had most difficulties in CB disarmament. There are exceptions, but by and large the CB disarmament community has not been a successful advocate or mobiliser. In the words of one community member: 'We have excellent subject matter experts; but don't know how to do outreach!' (Hammond 2003). This can be explained by at least four factors: the types of civil society actors involved; the complexity of the subject matter; the difficulty of engaging the public generally on disarmament issues; and the fact that the CWC and BWC give the impression that CB disarmament has been achieved.

An interesting contrast is provided by the public campaign mobilised in March 2002 against the US decision to call for the removal of the director-general of the Organization for the Prohibition of

Chemical Weapons, the Brazilian diplomat Jose Bustani. The campaign did not originate with the civil society actors in CB disarmament (some of whom shared the US concerns about Bustani's leadership), but with peace activists in the MoveOn.org (URL) organisation. However, it gained widespread press attention in the UK, an Internet petition, and a letter to *The Guardian* signed by figures from popular culture, and forced the UK government to explain its support for the US in Parliament. The issue was a transient one as Bustani was soon removed nonetheless, but it did demonstrate what could be achieved.

Lobbying

The CB disarmament community has had some success in lobbying but, as with public advocacy and mobilisation, lobbying is not an activity which comes naturally to those involved. In addition, lobbying in CB disarmament is an activity which takes place mainly at a national rather than an international level.

The US ratification of the CWC, for example, was helped considerably by US civil society. When the CWC was first considered by the Senate in September 1996, opponents of the CWC made all the running, led by Republican senators assisted by some civil society organisations opposed to the treaty. When it was reintroduced early in 1997, the treaty's supporters in the White House, Congress, and civil society were better prepared. Although the ratification process was handled badly by the Clinton Administration, the US eventually ratified with a few days to spare (Smithson 1997). According to an account of the campaign, civil society contributed to the national debate in four ways. They

elevated the intensity of public debate on the Convention and the problems posed by the proliferation of chemical weapons ... [I]mproved coordination and communication among themselves, with the executive and legislative branches of government, and with the news media ... [H]elped to focus members of the Clinton administration on the task at hand in the months prior to active presidential engagement, while providing

encouragement to supportive Senators ... [W]ere able to make unique contributions to the national debate that can only be made by outside, independent actors. (Parachini 1997: 37)

Direct participation in the formulation of international agreements

Governments have allowed no scope for civil society to directly participate in the formulation of international agreements relating to CB disarmament. The closest which civil society comes to such a role is the opportunity for transmitting policy ideas indirectly within the Pugwash CB warfare study group, which has both governmental and non-governmental membership, including industry participation. As Adler (1992: 105) notes: '[T]he political influence of transnational epistemic communities, such as the Pugwash group in the security field, is most likely to rest on the transfer from the international to the domestic scene of the ideas that *national* scientists and experts raise at their transnational meetings.' Workshops of the Pugwash study group on CB warfare are nowadays timed and located so as to coincide with international conferences relating to CB disarmament, thus

Governments have allowed no scope for civil society to directly participate in the formulation of international agreements relating to CB disarmament

ensuring a high level of attendance by both civil society and governmental representatives.

Monitoring and other assistance with compliance

Opportunities for civil society to monitor compliance in CB disarmament do exist and have been exploited to a limited degree. However, once again the influence of the 'state security discourse' means that the role of civil society is limited and that what few activities have taken place have done so at a national rather than a global level. An example of national monitoring is the work of the Sunshine Project in detailing the extent of the biodefence programmes of the German military (van Aken 2001) and its investigation into the US Joint Non Lethal Weapons Directorate (Sunshine Project 2002a).

The Sunshine Project, in a tactic borrowed from civil society groups working on environmental problems, has also taken this monitoring role a stage further by filing a legal suit against the Directorate for violating the national law which implements the BWC in the US (Sunshine Project 2002b). Tuerlings and Robinson (1999), in their elaboration of a 'tri-sectoral network' involving the public (governments), the private (industry), and the civil (non-government) sectors, highlight the role of the civil sector, particularly academic and research scientists, in monitoring new developments within biology and chemistry and thus contributing to upholding the relevance of the CWC and BWC in the face of scientific and technological advances.

Conclusions

The current situation is one in which, in contrast to nuclear weapons, the use, production, development, and stockpiling of CB weapons has been banned under international law. The international regime against CB warfare has many adherents: the BWC has 146 states parties; the CWC has 151 states parties; and the Geneva Protocol has 132 states parties. In many ways this is an immensely encouraging situation but it also works against the international regime. With regard to nuclear weapons, disarmament and delegitimation have not yet taken place, meaning that a lot of political and public attention is still paid to achieving or obstructing these goals.

In contrast, CB disarmament treaties have been successfully negotiated and are now in force, meaning that CB disarmament is no longer a significant political issue as it appears to have been 'done'. It is common for international treaties to lose political and public profile once they have entered the phase of routine implementation and the international regime against CB warfare is no exception (Flowerree 1990).

While many governments and civil society organisations were involved in campaigns for CWC ratification at the national level, many of them did not maintain their involvement once the campaign had succeeded. Key issues in this post-negotiation phase include: how to ensure that the BWC and CWC keep pace with developments in science and technology, how to uphold restrictions on non-lethal CB weapons,

how to ensure effective national implementation of both treaties, and, perhaps most importantly, how to address non-compliance with treaty obligations and enforce treaty prohibitions. Failure to address these implementation challenges can be just as damaging to the international regime against CB warfare as failure to further consolidate the regime.

The involvement of civil society in CB disarmament is now in a phase of transformation. There are four primary driving forces at work: the apparent end of multilateral treaty-making as exemplified by the collapse of the BWC protocol negotiations; a heightened public awareness of CB weapons, particularly of proliferation and terrorism; developments in other sections of global civil society; and the creation of an alternative frame for CB weapons. Not all of these phenomena are new; CB weapons rated high in the public consciousness in the late 1960s and again in the 1980s, and there have been other periods when treaty-making seems to have been at an end. What makes the current situation unique is the combination of all of these

CB disarmament treaties have been successfully negotiated, meaning that CB disarmament appears to have been done

factors and the interplay between them.

The collapse of the BWC protocol negotiations made some civil society actors in CB disarmament seek out new, more radical approaches, which they readily found in other areas of global civil society. Increased public awareness has provided an opportunity and a requirement for CB disarmament to be re-framed away from the state-centric, abstract, and technically complex focus on WMD and towards a more inclusive and resonant alternative.

For a number of reasons, the way in which CB weapons are currently framed is neither useful nor accurate. WMD is in many ways a spurious concept because CB weapons have much more in common with each other than either have with nuclear weapons: 'Only nuclear weapons are completely indiscriminate by their explosive power, heat radiation and radioactivity, and only they should therefore be called a weapon of mass destruction' (Harigel 2001). CB weapons differ from nuclear weapons in their potential lethality and destructive power, feasibility of protection, and defences, potential mission, and legal constraints on use and possession (Panofsky 1998).

The current public concern about CB terrorism overestimates the ease with which CB weapons can

be produced and disseminated, as a closer study of the Japanese cult Aum Shinrikyo demonstrates. According to the US Department of Defense in 1996: 'The ability to create mass casualties by using chemical and biological weapons depends on many factors. Finding the right agent, weaponizing the agent, delivering the agent in an effective manner, and waiting for the optimal meteorological conditions would be a challenge to any terrorist group. We just need to keep in perspective the reality of recent and potential events' (Swain 1996).

In addition, the current framing of CB weapons lacks resonance for global civil society. While participation in and attention to other areas of international law by civil society are increasing, its involvement in CB disarmament has remained static. This matters because, as other areas of global civil society have shown, when international agreements or regimes are under threat, public pressure and civil society action can be effective in reducing the threat. The small epistemic community currently following CB disarmament can only sit and watch when, for example, the BWC protocol collapses.

An alternative frame for CB weapons would encourage the evolution of a what Keck and Sikkink (1998) describe as a 'transnational advocacy network' consisting not only of an epistemic community but also of public movement campaigns and non-violent direct action, all cooperating with each other. This is already the case in nuclear disarmament: 'The track record shows that civil society was most successful when it worked at both the elite and public movement levels ... The very different strategies of prominent public activism and quiet, behind-the-scenes partnerships with policy makers can reinforce each other' (Johnson 2000: 75).

An alternative frame would incorporate numerous elements. The state-centric focus of the WMD frame would be replaced by an emphasis on the threat which CB weapons pose to global security and a return to the taboo against the use of poison and disease in warfare: 'Indeed, perhaps we must now start looking at that ancient taboo against CBW and at the BWC it has generated, not so much as a contribution to our national security, but as essential underpinning for the welfare and even the survival of our species' (Poste and Robinson 2000: 9). After all,

infectious disease knows no boundaries and West Nile Virus or Severe Acute Respiratory Syndrome demonstrate that our globalising world actually facilitates the spread of disease, primarily through air transport. One eminent biologist writes that: '[T]he problem of biological weapons rises above the security interests of individual states and poses an unprecedented challenge to all' (Meselson 2000: 19).

As the issue of landmines was 'humanitarianized' (de Larrinaga and Turenne Sjolander 1998), the new frame for CB weapons would have to incorporate CB weapons into the emerging concept of 'human security'. Few other weapons are as indiscriminate as CB weapons and almost none affects only humans (and plants and animals), leaving property and infrastructure untouched. A more inclusive frame for CB weapons would build on the linkages between CB disarmament on the one hand and public health and biodiversity on the other.

The current frame has failed to resonate with governments or civil society in the developing world, so an approach which emphasises the linkages with public health and biodiversity should be more successful.

Another element in this alternative frame, again reflecting developments in other areas, would be the concept of individual responsibility. The current treaties against CB warfare are directed mainly to the actions of states, not individuals. Recently, it has been proposed to make acts prohibited to states crimes under international law. The International Criminal Court Statute does not criminalise the specific prohibitions of the CWC and BWC, so a draft treaty to do so has been prepared by the Harvard Sussex Program (Meselson and Robinson 1998). By extending universal jurisdiction to violations of the CWC and BWC, the draft treaty would make violators *hostes humani generi* ('enemies of all humanity').

However, it is by no means certain that the issue can be re-framed satisfactorily. The negotiation of the Mine Ban Convention provides some food for thought: 'One of the great turning points in the efforts to ban [anti-personnel landmines] involved changing the terms of the debate from a military to a humanitarian issue ... The Ottawa Process certainly benefited from a media-friendly, morally unambiguous issue. Unfortunately, it may also suggest that the scope for such initiatives may be limited to certain

If an alternative frame for CB weapons is to be realised, the existing civil society actors will have to change their mindset and habits

topics' (Short 1999: 496). Comparisons with landmines are not necessarily useful. CB weapons have already been banned by international law and treaties are being implemented, thus removing the potential for a simple and direct 'ban CB weapons' campaign.

A campaign based on 'implement the CWC and BWC as negotiated' is not nearly as memorable. In addition, landmines are a tangible item intended for a single use. CB weapons, in contrast, are largely intangible items and the chemical and biological agents which are their key components are dual-use, with many legitimate purposes which cannot be hindered. Symbolism is also important. The landmines campaign, like other civil society campaigns, used powerful images and testimony from witnesses and victims, often women and children. While there are, of course, victims of CB weapons—for example, Iraqis who survived the Halabja massacre and those who were infected with anthrax from contaminated letters in the US—they are not nearly so numerous.

If an alternative frame for CB weapons is to be realised, the existing civil society actors in CB disarmament will have to change their mindset and habits. More emphasis needs to be placed on public advocacy and mobilisation, activities which the current academically oriented community is too ill-equipped and under-resourced to carry out. In particular, partnerships need to be established with other sections of global civil society so that, as in nuclear disarmament, the different actors can conduct joint campaigns involving policy research, public movements, and direct action, with all actors playing to their own strengths.

The creation of the BioWeapons Prevention Project could indicate that moves in this direction are under way; but the Project's prolonged birth is also a sign that this approach is not unanimously accepted. The current civil society actors in CB disarmament need to become better communicators so that their ideas and policy proposals reach beyond the present narrow target audience. As in other civil society campaigns, more use ought to be made of political opportunity structures, such as the anniversary of particular treaties and other international conferences and events like the anthrax letters and the war against Iraq, to educate or interest the public. The introduction of biological weapons issues into biodiversity and biosafety negotiations is one such example, but other opportunities exist.

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