The Problem of Chemical and Biological Warfare

Volume III

CBW and the Law of War

SIPRI

Stockholm International Peace Research Institute

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SIPRI

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THE PROBLEM OF CHEMICAL AND BIOLOGICAL WARFARE

A study of the historical, technical, military, legal
and political aspects of CBW,
and possible disarmament measures

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A description of the main lines of development in the technology underlying CBW and in the constraints affecting use of CB weapons. The period covered is approximately 1914–1945, although more recent developments in CW technology are also described. In addition, the volume includes an account of all instances known to SIPRI when CB weapons have been used in war, or when their use has been alleged; in this case the time-span is 1914–1970.

Volume II. CB Weapons Today

A description of the present state of CBW technology and of national CBW programmes and policies. It also includes a discussion of the attractions and liabilities of CB weapons, and of the consequences, intentional or unintentional, that might follow their use.

Volume III. CBW and the Law of War

A description of the legal limitations on use of CB weapons. It comprises discussions of the field of application of the Geneva Protocol, particularly as regards non-lethal chemical weapons and anti-plant agents, of the existence, development and scope of the prohibition of CBW provided by the customary law of war, and of the application to CBW of general principles of the law of war. It also reviews the juristic works in this field.

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A review of the activities of the League of Nations and United Nations in extending and reinforcing the prohibitions concerning CB weapons, including a report of recent negotiations for international CB disarmament. The volume also contains an account of those instances when formal complaints of the use of CB weapons have been made to the two world organizations.

Volume V. The Prevention of CBW

A discussion of possible measures that might be adopted to prevent future CBW. The volume describes steps that might be taken to strengthen the legal prohibition of CBW, and the problems and possibilities, including those of verification, involved in the negotiation of CB disarmament.

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projects on CB verification. The first project concerns the non-production of BW agents and involved visits to biological laboratories in several countries; the second concerns the non-production of organophosphorus CW agents and summarizes the results of a symposium.

PREFACE

The birth of this study of chemical and biological warfare can be traced back to 1964, when a group of microbiologists who were concerned about the problems of biological warfare started meeting under the auspices of Pugwash. After some meetings it became evident that there was need for more intense study than could be achieved through occasional gatherings of people who were busy with other work. In 1966–67 SIPRI, which was then starting up, decided to take on the task of making a major review of biological warfare. The study was soon extended to cover chemical warfare as well.

The aim of the study is to provide a comprehensive survey of all aspects of chemical and biological warfare and of the problems of outlawing it more effectively. It is hoped that the study will be of value to politicians, their advisers, disarmament negotiators, scientists and to laymen who are interested in the problem.

The authors of the report have come from a number of disciplines—microbiology, chemistry, economics, international law, medicine, physics and sociology and soldiery—and from many countries. It would be too much to claim that all the authors had come to share one precisely defined set of values in their approach to the problem. Some came to the problem because they were concerned that the advance of science in their field should not be twisted to military uses; others because they had taken a scholarly interest in the law or history of CBW; others because they had particular experience of military or technical aspects of it. What is true is that, after working together for a period of years, they have all come to share a sober concern about the potential dangers of CBW.

At an early stage it was necessary to face the question whether, if we assembled a lot of information on CBW and published all that we thought was relevant, we would risk contributing dangerously to the proliferation of these weapons. This proposition was rejected on the grounds that the service we could do by improving the level of public discussion was greater than any disservice we might do by transmitting dangerous knowledge. Secrecy in a field like this serves mostly to keep the public in ignorance. Governments find things out for themselves.

While the study has been in progress there has been much discussion of the subject. A group of experts appointed by the Secretary-General of the

United Nations has produced a report on *Chemical and Bacteriological (Biological) Weapons and the Effects of their Possible Use.* In the United States a rising tide of concern about CBW has given rise to Congressional hearings: a policy review, commissioned by the President, has led to the unilateral renunciation by the United States Government of biological weapons and to the decision to renounce first use of chemical weapons and to seek ratification of the Geneva Protocol. At the United Nations and at the Disarmament Conference in Geneva, CBW has received a lot of attention. A convention prohibiting the development, production and stockpiling of biological and toxin weapons has been concluded. Negotiations over a chemical disarmament treaty continue.

In response to an invitation from the UN Secretary-General, early drafts of parts of this study were circulated to his group of experts in February 1969. These drafts were also made available to the World Health Organization for the preparation of its own submission to the UN group of experts; this submission, together with the subsequent WHO publication based upon it, *Health Aspects of Chemical and Biological Weapons,* was prepared by a group of consultants that included Julian Perry Robinson from SIPRI.

The authors are conscious of the problem of avoiding biases. A disproportionate part of the information we have used comes from the United States. This is partly because the United States has been very active in the field of chemical and biological warfare in the post-war period. It is also because the United States is much more open with information than most other countries.

Since this is a team work and since, like most studies of this size, it grew and changed shape and changed hands in some degree as it went along, it is not easy to attribute responsibility for its preparation. The authorship of each part is indicated at the start of it, but these attributions do not convey the whole story. The team of people who produced the study met together often, shared material, exchanged ideas, reviewed each others' drafts in greater or lesser degree, and so on. So it is a corporate product, and those who wrote the final drafts sometimes had the benefit of working papers, earlier drafts, ideas or material provided by others.

At first, Rolf Björnerstedt was briefly in charge of the study. After an interval, Carl-Göran Hedén took over. When he had to return to the Karolinska Institute—from which he has continued to give us his advice and help—Robert Neild assumed responsibility for the project. The other members of the team have been Anders Boserup, who from the earliest stages has found time to come frequently from Copenhagen to help on

the project, Jozef Goldblat, Sven Hirdman, Milton Leitenberg, Åke Ljunggren, Theodor Nemec, Julian Perry Robinson and Hans von Schreeb.

The work on rapid detection of the use of biological warfare agents (Volume VI) was undertaken separately from the main study by Konstantin Sinyak, who came from the Soviet Union to work at the Karolinska Institute in Stockholm, and Åke Ljunggren, who went from Sweden to work at the Microbiological Institute in Prague. Both worked in close contact with Carl-Göran Hedén who contributed a study on automation. We are indebted to the two host institutes for the facilities and help they generously provided.

William Jewson, Rosemary Proctor and Felicity Roos edited this volume of the study.

A great debt is also owed to many people outside the institute—too many to name—for the help they have given us. This includes those who attended the early Pugwash meetings on biological warfare, those who attended meetings at SIPRI on biological and chemical warfare, those who wrote working papers for us, those who gave their time to the biological inspection experiment and many people who have visited us or helped us with advice and material at different times. It includes people from many countries, East and West, and many disciplines. It includes people with many different kinds of expertise. The amount of help they gave us—and it was far greater than we had expected at the start—was clearly an expression of their concern about the problem. We are very grateful to them all. The responsibility for what is said is, of course, ours.

December 1972

Frank Barnaby
Director

Note

The material in this volume is based on data that was available to SIPRI up to the summer of 1972, when the book went to press.

Updated lists of parties to the Geneva Protocol of 1925 (appendix 2), of parties to the Convention on the prohibition of the development, production and stockpiling of bacteriological (biological) and toxin weapons and on their destruction (appendix 4) and of United Nations General Assembly resolutions on CBW (appendix 3) are published annually in the SIPRI Yearbooks.

ATTRIBUTION

This volume was written by Anders Boserup. It draws heavily on two studies commissioned by SIPRI: "Biological Weapons and International Law" (originally written in French), prepared in 1967 by Dr Henri Meyrowitz,[1] and "On the Question of the Prohibition of the Development, Production and Possession of Chemical and Biological Weapons" (unpublished), prepared in 1968 by Dr Knut Ipsen, Institute of International Law, University of Kiel. Some sections of the text are taken almost *verbatim* from the first of these studies.

[1] Published in revised and enlarged form under the title *Les Armes Biologiques et le Droit International (Droit de la Guerre et Désarmement)*, Paris: Editions A. Pedone, 1968.

CONTENTS

Introduction

Square-bracketed references, thus [1], *refer to the list of references beginning on page 180.*

The rules which restrict the rights of states to use chemical and biological weapons in war are of two kinds. First there are those rules which prohibit the use of CB weapons because of the chemical or biological nature of these weapons.[1] These rules are by far the most important and they are dealt with at length in this volume.

Second, there is a set of general precepts of the law of war which do not refer specifically to CBW but which nonetheless proscribe certain possible uses of these weapons irrespective of any specific CBW prohibitions. These are general rules incorporated in the customary law of war which new weapons must not violate if they are to be admitted as legitimate, even if no prohibition is specifically aimed at them. These rules consist, on the one hand, of prohibitions against certain types of weapon

[1] The terms *chemical* and *biological* applied to means of warfare appear in the literature and in authoritative statements with a number of different meanings. Toxins have sometimes been included in one category, sometimes in the other; anti-lubricants, smoke-producing agents and incendiaries are occasionally described as chemical warfare agents; some older sources describe herbicides, whatever their nature, as biological weapons. In addition, one finds a plethora of other terms such as "poison gas", "germ warfare", etc., the exact meanings of which are seldom made clear.

For obvious reasons it is sometimes necessary in this volume to follow the convention used in the particular document or statement under consideration, but wherever possible we try to follow the notation used in other volumes of this study. Unless otherwise specified, a *chemical* warfare agent (CW agent) therefore means an agent which is, or might be, used in hostilities because of its direct toxic effect on man, animals or plants. In this usage, which as regards the word "toxic" follows the definition used by the World Health Organization [1], CW agents thus include the nerve gases and the traditional poisons of warfare, including tear gases, together with toxins, whether of bacterial or any other origin, and chemical herbicides. A *biological* warfare agent (BW agent) is one that causes death or disease in man, animals or plants following multiplication within the target organism. BW agents thus include all pathogenic micro-organisms and infective materials derived from them. (These and alternative definitions are discussed in Volume II.)

In accordance with what has been normal practice in recent years, *toxins* are thus regarded as chemical weapons, despite the fact that in those texts of conventional law which refer explicitly to toxins they are treated together with BW agents. In one instance they are subsumed under the latter (Protocol No. III of the Revised Brussels Treaty, Annex II, Section III); in another more significant and more recent document, BW and toxins are given equal status from the standpoint of law, but their juxtaposition in that text indicates that toxins are regarded as chemical weapons (Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction).

to which CB weapons will in many cases belong, namely, the prohibition of poison and poisoned weapons and the prohibition of weapons of a nature to cause superfluous injury or unnecessary suffering. On the other hand, they consist of prohibitions against the use of any weapons whatsoever against certain types of target. Most important among these is the principle of the immunity of the civilian population. In most cases, of course, these rules add nothing to a prohibition which is already absolute. Consequently, their chief importance (from the point of view of prohibiting and preventing CBW) lies in those cases where the application of the CBW prohibitions themselves could be construed as questionable. The most important case of this kind is the use of antiplant agents in war.

A third set of regulations consists of the prohibitions of production and possession of CB weapons. The most important is the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, signed on 10 April 1972 by a large number of states. It will enter into force after twenty-two governments, including those of the United States, the Soviet Union and the United Kingdom, have ratified it.[2] As regards chemical weapons (other than toxins) the development of the law of the prohibition of production and possession is still at a rudimentary stage.[3] Not belonging

[2] The text of the Convention and a list of signatories is given in appendix 4. The most important states which have not signed it are China, France and India. The French National Assembly, instead of acceding to the Convention, has passed a law prohibiting the production and possession of agents of biological and toxin warfare and inducements or assistance to others in such operations. Its interest transcends the French context in that it provides safeguards against preparations for biological or toxin warfare which may be no less effective than those instituted by the international convention and which would in any case be a possible supplement to the latter. The text of the law is reproduced in appendix 5.

[3] In its preamble, the 1972 convention on biological weapons disarmament affirms the determination of the parties to continue negotiations on effective measures for a similar prohibition of chemical weapons. In Article IX the parties recognize this objective and undertake to negotiate in good faith with a view to reaching an early agreement (see appendix 4).

Other elements of the law of disarmament which apply to chemical weapons (and, mostly, to biological weapons as well) are of limited importance. The treaties in question are either obsolete (prohibitions of production and importation of chemical weapons imposed on certain countries as part of the World War I peace treaties), or they are obligations or renunciations which apply only to a few countries (the renunciation of chemical and biological weapons by West Germany under the terms of the Revised Brussels Treaty of 1954; the quantitative limitations which, theoretically, this same treaty imposes on WEU countries other than West Germany; the prohibition as regards Austria, enunciated in Article 13 of the Austrian State Treaty of 15 May 1955; and the provisions limiting possession of CB weapons by Bulgaria, Finland, Hungary, Italy and Romania, included in the peace treaties of 10 February 1947; cf. Volume V: pp. 214–19 and appendix 3), or they are applicable only to certain types of CB weapons, and only to their placement in quite unusual environments (treaties prohibiting the placing of nuclear weapons and other weapons of mass destruction in orbit, in outer space and on the sea-bed).

to the law of war, prohibitions of possession, even though they also have as their primary object and purpose the prevention or limitation of use, nonetheless pose problems of a legal kind which are quite different from those posed by prohibitions of use proper. Certain aspects of prohibitions of production and possession of CB weapons are dealt with in parts of Volumes IV and V.

The law of war being a system of norms, it is clear that it usually consists of two distinct elements: on the one hand certain explicit conventions, duly ratified or acceded to or otherwise accepted by states, and on the other, certain rules which have emerged from the practice of states and have come to be regarded by states as binding, which express their conceptions of acceptable and unacceptable conduct, which are on the whole complied with, but which have not been explicitly formulated in internationally binding documents. These latter norms are referred to as rules of the customary law of war.

In accordance with this dual character of international legal norms, Article 38 of the Statute of the International Court of Justice lists, in addition to the general principles of law recognized by civilized nations, the following sources of international law:

1. International conventions, whether general or specific, establishing rules expressly recognized by the contesting states;
2. International custom, as evidence of a general practice accepted as law.

The prohibitions of CBW are of both kinds. On the one hand, there is a set of conventions, the most important of which are the Hague Regulations of 1907 prohibiting (*inter alia*) the use of "poison or poisoned weapons", and the Geneva Protocol of 1925 which prohibits the use in war and among its parties of "asphyxiating, poisonous or other gases, and of all analogous liquids, materials and devices" as well as "bacteriological methods of warfare". The Protocol is today by far the most important. It has been ratified or acceded to by most states and almost all militarily and politically important ones.

At the same time that these prohibitions apply, CBW is also prohibited by virtue of a custom which finds expression in, and results from, a long practice of non-use of CB weapons in war, and from a general acceptance, even shared by states not parties to the Geneva Protocol, that such abstention corresponds to a legal obligation.

In the law of war the co-existence of a conventional rule and of a custom which have approximately the same content is the rule rather than the exception. This is due to the particular mode of formation of that body of law. It has mostly arisen out of traditions and moral convictions as to what does and what does not constitute civilized warfare. In the

course of the nineteenth and twentieth centuries, several of these norms have been codified in treaties, and some of these have been duly ratified by a larger number of states. Such treaties thus become declarations of existing custom. But they also often go beyond what can be considered effective custom at the time of their conclusion, in that the treaty mostly represents an average opinion or even a more advanced opinion as to what the law is and ought to be, whereas a customary rule is more akin to a least common denominator of prevailing legal conceptions.

In this process, and particularly in proportion to the increasing number of accessions to these treaties, the custom is itself confirmed and strengthened; the convention itself, to the extent that it approaches universality, becomes supporting evidence for the existence of the custom, and in those cases where the convention goes further than the generally accepted scope of the customary rule from which it arose, the latter may gradually change its scope to conform more closely with the former. Such a process of reciprocal action has taken place in the case of the CBW prohibitions. The "Conventions Concerning the Laws and Customs of War on Land", signed at the Hague in 1899 and 1907, prohibited, inter alia the use of poison and poisoned weapons. This prohibition was essentially a codification and specification of pre-existing legal norms as shared by the "civilized" nations of the day. This and other rules enunciated in the Hague Conventions have since become accepted as expressions of generally valid custom. With the development and use of chemical weapons in the modern sense during World War I, the need arose for a more explicit prohibition, contained in the Geneva Protocol. At the time of its conclusion, some states felt that they were codifying already existing legal rules, others that they were creating a new rule to expand the scope of insufficiently comprehensive prohibitions then in existence. The Protocol thus went beyond what was generally accepted at the time as customary law.

At first, therefore, the Geneva Protocol had the character of an additional obligation, binding upon the parties to that treaty and upon them alone. However, as the number of ratifications and accessions increased, it gradually came to be viewed as a rule from the provisions of which no state could claim exemption. In the late 1960s, this process of development into customary law was completed. Evidence for this is found in resolutions by the UN General Assembly which received virtually universal support and which precisely affirmed the binding character of the "principles and objectives" of the Protocol for all states, irrespective of formal adherence. Apart (perhaps) from the question of the legality of the use of irritant-agent weapons and herbicides in war (which is dealt with at length below), customary law prohibiting the use of CB weapons in war is now co-

extensive with conventional law. The next steps in the development are already becoming apparent: on the one hand, the customary law is tending to catch up with conventional law on the question of irritant agents and herbicides, and on the other, conventional rules are again moving ahead of customary law, particularly in the field of the prohibition of BW. For the parties to that treaty, their adherence to the biological weapons disarmament convention will imply a renunciation of BW extending also to its use for reprisals in kind, thus extending the prohibition of BW to an absolute one. (These points are discussed more fully in Volume V, chapter 1.)

From a formal point of view, it is possible to make a sharp distinction between these two forms of law: custom and convention. The kinds of evidence to be considered in ascertaining the existence and scope of rules of each kind is entirely different. With a convention, the document itself is the primary evidence and its field of application is determined by the rules of treaty interpretation. If the treaty text itself is unclear on some point, the intentions of the drafters and the subsequent practice of parties in the application of the treaty are to be used as supplementary means of interpretation.[4]

With a custom, the primary evidence is the conduct of states-the extent to which states conform to the prescriptions (or proscriptions) of the presumed rule-and their convictions as to the obligatory character of such conduct. The primary sources of evidence thus become actual conduct in war, official expressions of views on the legality of different forms of CB warfare and international acts which imply or presuppose such views. In the case of a custom the evidence is almost inevitably somewhat contradictory, and it is often so contradictory as not to be conclusive,

Conventional rules are therefore on the whole more precise and certain than are the corresponding customary rules-and this is one reason why states have tried to codify customary rules in treaties. Yet one occasionally encounters the belief that custom is also a less real, less reliable and less valid form of law. It is well to dispel such notions from the outset. Not only do they contravene accepted legal doctrine, but it is also difficult to see what they can possibly mean. It is anyone's privilege to define "law" as he pleases and to exclude custom from the meaning of this term, but then it is nothing but a semantic point. It is also anyone's privilege to believe that a certain form of warfare, herbicide warfare, say, is not proscribed by custom. If so, the strength and reality of the customary rule which may

[4] These commonly accepted rules of treaty interpretation are now given formal expression in the Convention on the Law of Treaties, opened for signature at Vienna on 23 May 1969. For a more precise formulation see p. 41.

otherwise have prohibited such warfare will of course be affected to a certain extent. But if a customary rule exists according to the above-mentioned criteria—in other words if there is a certain pattern of conduct accompanied by a universal or quasi-universal belief that such conduct corresponds to a legal obligation—then this rule has in every respect the same effects as a convention. In domestic law, sanctions against violations can be applied according to rigid procedures. There it would be possible in principle to exonerate violations of non-codified rules from penal sanctions. If so, codified law would be in this respect more "real". But in the law of war, sanctions are of a different kind. They consist of protests, international condemnation, political isolation, the risk of reprisals, the risk of subsequent trial for war crimes, etc. In this case there is no way of distinguishing custom and convention. What other states believe to be the law, and what they feel justified in expecting and demanding their enemies to respect, *is* law because it functions as such. The law of war is inherently a matter of general conviction, and for this reason custom and convention are inseparable in their practical effects. If any part of the law of war is to be pronounced less certain and less compelling than the other, then it would be more logical so to describe conventional law, for in this case it is *possible* for a rule to be a mere paper promise. The "unreal" part of the law of war consists precisely of conventions which do not also to a considerable extent have the attributes of custom.

Many rules of the law of war—and this applies to the CBW prohibition in particular—are at once customary and conventional. Despite this, they constitute of course one and only one rule, and the separation of custom and convention only assumes importance for purposes of ascertaining the existence and the scope of the rule. In this volume, however, the principal task will be precisely to discuss the application of *the* CBW prohibition to cases in the vicinity of what are, or have been thought to be, the borderlines of the prohibition: the use of chemical and biological weapons in conflicts not of an international character, the extent to which CB weapons may or may not be used for reprisals in kind, and so forth. Because of the different modes of formation of custom and convention and of the different kinds of evidence which need to be considered when dealing with these two forms of law, an integrated approach would be exceedingly cumbersome and confused. Although strict logic would require that customary and conventional limitations on particular forms of CBW be discussed together, they will often be treated in separate chapters in this volume. It is to be emphasized that this separation is motivated only by convenience in surveying the evidence. The rules which emerge from these surveys are only distinct in legal theory. In practice, they are rather

to be envisaged as different ways of analysing the same cluster of prohibitions. According to whether this cluster is considered from the angle of contemporary customary law or from the perspective of existing conventional rules, it appears in a slightly different form: neither the subjects of law nor the extent of its coverage will be exactly the same in these two cases. But ultimately there is one norm, one law, which is at once customary and conventional in nature and which is applicable to certain cases by virtue of its conventional character, to others by virtue of its character as a customary rule, and to most by virtue of both.

The evidence is usually least controversial and most explicit in the case of a convention. The Geneva Protocol of 1925 is therefore taken as the starting point and the standard of reference in relation to which the other elements of the law of war are discussed. Again, this is dictated solely by reasons of convenience and is not meant to imply any primacy of this treaty over the other elements of the law, whether in the historical development or in the force and imperative character of its provisions.

Chapter 1. General survey of the CBW prohibitions and of pertinent evidence

The main treaty relating to CBW is the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases and of Bacteriological Methods of Warfare. It was signed in Geneva on 17 June 1925, and reads as follows:

> The undersigned Plenipotentiaries, in the name of their respective Governments:
>
> 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; and
>
> Whereas the prohibition of such use has been declared in Treaties to which the majority of Powers of the world are Parties; and
>
> To the end that this prohibition shall be universally accepted as a part of International Law, binding alike the conscience and the practice of nations;
>
> Declare:
>
> That the High Contracting Parties, so far as they are not already Parties to Treaties prohibiting such use, accept this prohibition, agree to extend this prohibition to the use of bacteriological methods of warfare and agree to be bound as between themselves according to the terms of this declaration.
>
> The High Contracting Parties will exert every effort to induce other states to accede to the present Protocol.

This Protocol has two direct antecedents, both of which are limited to chemical weapons. The first of these antecedents, from which the definition of CW is taken, is Article 171 of the Treaty of Versailles:

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

The same provision also appears in the other peace treaties of 1919–1920.[1]

The other direct antecedent is Article 5 of the Treaty of Washington of 6 February 1922 relating to the use of submarines and noxious gases in wartime. The Treaty of Versailles referred to a general and pre-existing

[1] Article 135 of the Treaty of Saint-Germain; Article 82 of the Treaty of Neuilly; Article 119 of the Treaty of Trianon; and Article 176 of the Treaty of Sèvres (which never became effective). In these dispositions flame-throwers were added to the list.

prohibition of the law of war, but it only formulated a special prohibition, applicable to Germany and to the manufacture and importation of chemical weapons. As a treaty, but not as evidence of a customary prohibition, it therefore belongs to the law of disarmament. The Treaty of Washington, in contrast, was meant to be a general prohibition of chemical warfare. It read as follows:

> The use in war of asphyxiating, poisonous or other gases, all analogous liquids, materials or devices, having been justly condemned by the general opinion of the civilized world and a prohibition of such use having been declared in treaties to which a majority of the civilized Powers are parties, the Signatory Powers, to the end that this prohibition shall be universally accepted as part of international law binding alike the conscience and practice of nations, declare their assent to such prohibition, agree to be bound thereby as between themselves and invite all other civilized nations to adhere thereto.

This treaty was concluded between the United States, the British Empire, France, Italy and Japan. It never entered into force because it was not ratified by France, for reasons not related to the object of Article 5.

The wording of both antecedents refers explicitly to the existence of earlier sources of the prohibition of CW. These sources, which are also cited by the Geneva Protocol, are of two kinds: those which relate to the sources of general international law and which also constitute foundations for the customary rule, namely, "the general opinion of the civilized world" and the idea of an obligation "binding alike the conscience and practice of nations"; and the "Treaties to which the majority of Powers of the world are parties" or "a majority of civilized Powers are parties".

The contractual sources of these prohibitions, in other words the earlier agreements cited in Article 5 of the Treaty of Washington and in the preamble of the Geneva Protocol, consist of treaties formulating an express prohibition of CW, the peace treaties of 1919–1920[2] and conventional rules which, without envisaging chemical weapons in particular, or all kinds of chemical weapons, were nevertheless considered applicable to such weapons. The latter are mentioned in a memorandum containing a statement of positive law concerning the use of gas in wartime, adopted by the subcommittee on the laws of war of the Conference on the Limitation of Armaments, from which the Treaty of Washington originated. [2] They are the Declaration of Saint Petersburg of 1868 which affirmed in its pre-

[2] The treaty of peace between the United States and Germany, dated 25 August 1921, included by reference Part V of the Treaty of Versailles, which contains Article 171. The reference to the provisions of the Treaty of Versailles was made by a general formula by which the United States benefited from the rights and privileges resulting from the clause in question. Regardless of that wording, it has always been admitted that the treaties envisaged in the preamble of Article 5 of the Treaty of Washington and of the Geneva Protocol included the German–American Treaty of 1921.

amble that "the only legitimate object that states should endeavour to accomplish during war is to weaken the military forces of the enemy", the Hague Declaration of 1899 which prohibits "the use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases"; Article 23 (a) of the Regulations annexed to the Hague Conventions of 1899 and 1907 which prohibits the use of "poison or poisoned weapons", and Article 23 (e) which prohibits the use of "arms, projectiles or materials calculated to cause superfluous injury"; and, finally, Article 171 of the Treaty of Versailles.[3]

It may be noted that, according to the wording of the Geneva Protocol, the various sources cited referred only to the prohibition of CW. They would have a bearing upon BW only if it were possible to interpret the formula of the instruments of Versailles, Washington and Geneva—"and of all analogous liquids, materials or devices"—as including biological agents. Some delegates at the conference which drew up the Protocol thought this to be the case. The actual wording of the Protocol—"agree to extend this prohibition to the use of bacteriological methods of warfare"—does not, however, support such a broad interpretation. In any case this issue is not of great importance today. What matters is not whether the rule prohibiting the use of biological weapons existed *prior* to the 1925 Geneva Protocol, but whether it now exists as a customary rule *independent* of the Protocol. It will be shown below that this is indeed the case.

It is impossible to specify with any degree of precision the epoch in which the customary prohibition of CBW may be said to have emerged or what its precise origins are. It has developed from a number of different strains: notions of what constitutes chivalrous and civilized warfare, norms against insidious and treacherous means of warfare such as poisoning, etc. The general norm proscribing CBW has developed progressively, and, as noted in the introduction, in close connection with the development of conventional prohibitions, and has adapted in the process to new means of CBW as they became available. As Schwarzenberger has shown, there is a continuous line of development from Gentilis via Grotius to the Hague Conventions of 1899 and 1907 and to the Geneva Protocol. [3]

Several of the treaties, it was noted, referred to sources of customary law which were thought to be already indicative of an existing norm. The drafters of the Geneva Protocol, judging by the text of that treaty, thought of it as a reaffirmation of an existing norm, not as the creation of a new one.[4] They had drawn up the Protocol "to the end that this [existing]

[3] For further details, see appendix 1.

[4] However, not all the delegates to the conference where the Protocol was drawn up shared this view (see p. 105).

prohibition shall be universally accepted as part of International Law", in other words with the purpose of consolidating the general prohibition by expressly affirming it in a treaty.

The several treaty texts of this period all refer to such a pre-existing rule as a fact. The Treaty of Versailles spoke of CW as "*being* prohibited". The Treaty of Washington, like the Geneva Protocol, spoke of the use of chemical weapons as "*having been* ... condemned" and the prohibition of use as "having been *declared*" in previous treaties. According to the Convention for the Limitation of Armaments of Central American States of 1923, the use of these weapons, in the opinion of the contracting parties, "*is* contrary to humanitarian principles and to international law" (emphases added).

Another notable fact in regard to the customary prohibition of CBW is that, since the massive use of chemical weapons in World War I which led to the conclusion of all of these treaties, chemical weapons have only very rarely been used in war, and when they were or are thought to have been used, clear indications show that virtually all states condemned this use and held it to be illegal. Only three important cases of CW are definitely known to have taken place since World War I: the Italian attacks on Ethiopia in 1935–36, the Japanese attacks on China before and during World War II, and the use of irritant-agent weapons and herbicides by the United States and its allies in Viet-Nam.[5] In the latter case, the belligerents using these weapons do not deny the illegality of CBW in general but claim that the weapons used are exempted from that prohibition. This case is therefore relevant to an examination of the scope of the prohibition, not to its existence as such.

The belief of states regarding the existence of a customary prohibition of both chemical and biological warfare has found its clearest expression in a resolution adopted by the UN General Assembly in December 1966. In effect, this resolution affirmed that the Geneva Protocol is simply an embodiment of a general prohibition binding on all states, regardless of their adherence to that treaty.[6] The great legal and political importance of this resolution derives from the fact that it was adopted virtually unanimously and without a single opposing vote, and that the delegations which voted for it included nearly all those states which were not yet

[5] Egyptian forces are also alleged to have engaged in CW in the recent civil war in the Yemen. The evidence is inconclusive either way and the allegations have been denied. (See Volume I and appendix 3 of Volume V.) Volume I also lists allegations of CBW in about 40 other conflicts since World War I. It is impossible to say how many of these were true and how many were fabricated. At any rate, both the military and the legal importance of these cases, if they occurred, would have been slight.

[6] The texts of this and other UN resolutions on CBW are given in appendix 3.

parties to the Protocol, in particular the United States and Japan. This resolution is therefore a demonstration of acceptance by almost all states of the consolidation of the conventional prohibition of CBW into a rule of customary law. It also represents the first incontrovertible evidence that the long-standing restraint of the United States in the use of CB weapons does not proceed (or no longer proceeds) from a policy decision which may, in principle, be rescinded at will, but from a legal obligation. It may be noted already at this point that, technically speaking, the resolution is not of a legislative character: it does not claim to create a new legal norm. On the contrary, it refers to an existing conventional rule, the value and validity of which it cites. The fact that UN General Assembly resolutions are not vested with the force of obligation, but constitute recommendations only, is therefore of no importance in this connection, for the imperative force which the resolution recognizes as being held by the rule prohibiting CBW does not reside in the resolution but in that rule itself. This question is discussed at greater length in chapter 5, below.

This resolution was prompted by what is nowadays the main point of controversy regarding the CBW prohibitions: the question of the legal or illegal character of irritant-agent and herbicide warfare as practised in Viet-Nam. (In its final form, this resolution did not take sides in this controversy—and this is indeed the reason why it secured such wide support.)

The wording of the Geneva Protocol does not make it readily apparent whether that instrument was meant to prohibit the use in war of irritant-agent weapons and herbicides, but, until the use of these means of warfare began in Viet-Nam, this possible ambiguity had not given rise to serious dispute over the interpretation of the Protocol. In the case of irritant-agent weapons, the issue had actually been settled in 1930 in favour of the extensive interpretation. All the available evidence suggests that the prohibition was also meant to cover agents such as herbicides. Against this, the United States has maintained, in the face of mounting criticism of its use of chemical weapons in Viet-Nam, that the use of irritant-agent weapons and of herbicides was prohibited neither by customary law, nor by the Geneva Protocol (to which the United States is not a party but the provisions of which it has otherwise obeyed). In the last few years this restrictive interpretation which the United States advocates has found full or partial support from a few other states. The most important of these is the United Kingdom, which, while apparently recognizing that the use of tear gases in war is prohibited, has nonetheless affirmed that the prohibitions do not apply to one of the irritant agents: CS.[7]

[7] See pp. 60–62.

Since 1966 repeated debates in the United Nations and elsewhere have shown that the vast majority of states continue to defend those interpretations they had defended in the inter-war period, according to which the Protocol as well as the customary rule absolutely prohibit the use in war of *any* kind of chemical or biological weapon. A resolution to this effect was adopted in 1969 by the UN General Assembly (Resolution 2603 A (XXIV)).[8] It secured 80 positive votes as against only four negative ones, while 36 states abstained. This voting record bears witness both to the conviction shared by a large majority of states regarding the absolutely comprehensive character of the ban, and to the fact that this view is still opposed by some states. Since then the tendency towards increasing acceptance of (or resignation to) a restriction of the scope of the prohibitions, which had been apparent in the latter half of the 1960s, appears to have been halted or even reversed. Some states which previously hesitated have since expressed their willingness to follow the view of the majority and support the extensive interpretation.[9]

If the debates and controversies of recent years have not yet led to a full consensus regarding the scope of the prohibitions, they have nonetheless had a considerable impact on the development of the law. First, the interest which has been aroused in regard to the Geneva Protocol has induced a large number of states which had not yet done so to accede to that treaty. As a result, it is now adhered to by all militarily or politically important states, except the United States, and by most of the less important states as well. Secondly, the number of official statements which have been forthcoming in recent years, not least in the form of votes cast in the General Assembly, provide substantial evidence for the *general* acceptance of a customary prohibition of CBW and for the *widespread* acceptance of the broad interpretations both of the customary rule and of the Geneva Protocol. Finally the debate on CB weapons disarmament has gained momentum in this process.[10]

In summary, the analysis of the present state of the law of war in regard to CB weapons must be based on four main sets of evidence (in addition to a number of other sources of less general importance):

First, there are the treaties, the most important of which is the Geneva Protocol. Their scope is to be ascertained on the basis of their wording and, where this does not suffice, of the circumstances of their conclusion and the interpretations the parties have given to them.

Second, there are the general precepts of the law of war. Their exact

[8] See appendix 3.
[9] This has been the case with Canada, the Netherlands and Norway; see pp. 62–63.
[10] On this last point see Volumes IV and V of this study.

field of application is also in many cases not quite clear. These general precepts are particularly important in those cases where the application of the prohibition—customary or conventional—specifically relating to CBW can be questioned. The use of antiplant agents in war is the main case.

Third, there is the practice of states over the past 50 years. It is relevant, both to an assessment of the interpretation which states, by their acts, have given to the conventional rule, and in determining the existence and scope of the customary rule.

Finally, there are the expressions by states of their legal convictions. In this connection the UN General Assembly resolutions of the last few years are particularly important.

Chapter 2. Situations to which the prohibitions apply

I. *The meaning of "war"*

The Geneva Protocol specifically prohibits the *use in war* of chemical and bacteriological methods of warfare. The prohibition envisages only the *use* and not the production of chemical or biological weapons, or any other measures of preparation for CBW.

The recognition of the ambiguous character of the expression "in war" is not new. [4] Recent agreements relating to the law of war do not refer simply to "war" to designate the situations in which they apply. Their field of application—aside from cases of occupation—is defined thus: "all cases of declared war or any other armed conflict which may arise between two or more of the High Contracting Parties, even if the state of war is not recognized by one of them",[1] or "is not recognized by one or more of them".[2] There is no doubt that the formula used by the Protocol covers this broader meaning and that it means *any armed conflict arising between the high contracting parties.*

On the other hand, the Protocol in itself is not applicable to armed conflicts not having an international character. This differentiation between those armed conflicts which have, and those which do not have, an international character is of great importance at a time when "international civil wars"—wars of national liberation and revolutionary or subversive wars—seem to be on the increase, and when the name the parties give to them, whether international conflict or civil war, is largely determined by considerations of expediency.

International law has so far succeeded in creating only a few fragmentary and rudimentary rules applicable to armed conflicts within a state: the common Article 3 of the four Geneva Conventions of 1949, the Convention of 9 December 1948 concerning genocide, and the condemnation of crimes

[1] Article 2, common to the four Geneva Conventions of 12 August 1949.
[2] Article 18 of the Hague Convention of 14 May 1954, on the protection of cultural property in the event of armed conflict.

against humanity.[3] The covenants of human rights also contain some articles which may not be suspended by states, even in situations of emergency such as civil war. Apart from these cases, international treaty law does not cover means of injuring an enemy in an armed conflict not presenting an international character. Formally, the applicability of the Geneva Protocol itself to an armed conflict not having an international character would also seem to raise the problem of the contractual obligation, in such a conflict, of a participant which is not and cannot be a party to the Protocol because it is not, according to international practice, regarded as a state. This latter problem is, however, mostly formal. The obligation of an insurgent party within a state to observe humanitarian rules accepted by that state is no more paradoxical than is the obligation of a new state, born into a community of states, to observe the customary rules of that community.

The field of application of the *customary* rule prohibiting the use of CB weapons is not quite so narrowly circumscribed as is that of the conventional rule. The customary rule being a part of the international law of war, the subjects of that rule are still the states. Nonetheless, the fact that no prior explicit acceptance is required for a customary rule allows a somewhat broader interpretation of the concept of a state in this case.

In considering the field of application of the customary rule, past practice as well as common conviction constitute the primary evidence to be taken into account. In this connection it is useful to distinguish between conflicts which, without being inter-state conflicts, are nonetheless international in character and conflicts of a purely domestic kind, such as civil wars and insurrections.

The conflict in Viet-Nam belongs to the first category. It provides

[3] Article 6 (c) of the Charter of the International Military Tribunal of Nuremberg (London Agreement of 8 August 1945) and Article II, 1 (c) of Law no. 10 of the Allied Control Council in Germany, dated 20 December 1945 define crimes against humanity. It must probably be recognized that these definitions have the character of customary law. Even though crimes of genocide and against humanity are committed in wartime (The Nuremberg Charter envisaged only crimes against humanity committed "in execution of, or in connexion with any crime within the jurisdiction of the Tribunal", which would mean a crime against peace or a war crime. The tribunal refused to declare acts perpetrated prior to 1939 as crimes against humanity within the meaning of the Charter), such acts do not assume combat relationships. At least that is true of crimes against humanity which do not at the same time constitute war crimes, that is, which are perpetrated against persons not protected by the law of war (in the case of protected persons the problem discussed above does not arise). Likewise, Article 3 of the Geneva Conventions of 1949 exclusively envisages persons who are not participating directly in the hostilities or who are no longer in a position to participate, and who find themselves within the power of the other side—in other words, persons who never were in a combat relationship or who are no longer in that relationship.

significant evidence on the practice of states and on their beliefs concerning the application of the customary prohibition to this kind of conflict. This war is in part an international conflict, but it is not—or not exclusively—an inter-state conflict [5]. Yet, according to the practice and the declarations of the United States and of its allies, the international rules governing CBW—and also other rules of the law of war—apply in this case. Forms of CW which (in the opinion of the United States) are prohibited under international law have not been used in Viet-Nam, and on the many occasions when it has had to defend its use of irritant-agent weapons and herbicides against criticism, the United States has never sought refuge in the unorthodox character of the war.

Most other states have had no opportunity to demonstrate their determination to comply in their conduct with the CBW prohibition in this, or indeed in any other type of conflict. On the other hand, their beliefs regarding the applicability of the CBW prohibition to the Viet-Nam War have often been voiced, at least implicitly, in resolutions and individual statements prompted by US chemical warfare in Viet-Nam. The many condemnations—direct as well as indirect (for instance in UN General Assembly resolution 2603 A (XXIV) of 1969)—of these practices, of course, presuppose not only a belief in the existence of a customary prohibition of CBW broad enough to cover herbicides and/or irritant-agent weapons, but also a belief that this customary rule is applicable even in conflicts which are not between states.[4]

In drafting UN General Assembly resolution 2603 A (XXIV),[5] which was an attempt to define the scope of the Geneva Protocol and of the customary rule, some delegates sought to characterise the field of application of these prohibitions by the expression "armed conflicts". This is the same expression as that which appears in humanitarian conventions such as the 1949 Geneva Conventions. This expression seems to include not only conflicts which one or several parties may deny calling "war", but also armed conflicts falling short of war, such as local, relatively small-scale outbreaks of violence. This expression also conforms with the practice which has recently developed of replacing the expression "law of war" by "law of armed conflict". [6]

The expression "armed conflicts" was nonetheless opposed by certain

[4] The evidence that the CBW prohibitions apply in the case of the Viet-Nam War is rendered particularly pertinent to this discussion by the fact that the use of chemical weapons has taken place not in the context of the war against the state and the armed forces of the Democratic Republic of Viet-Nam, but primarily, if not exclusively, in the counter-insurgency warfare conducted within the South (and also in Laos and Cambodia).

[5] See appendix 3.

states, reportedly motivated by the fear that by affirming their adherence to a prohibition applicable to all armed conflicts, international or not, they might expose themselves to criticism in future situations in which internal policing operations might look to outsiders like armed conflict. It is in this ambiguous character of situations of internal conflict—situations which, depending on one's political interpretations, may appear either as civil war or as a case of restoration of order—that the main political impediment is to be found which renders it difficult to reach agreement on a broad interpretation of the situations to which the CBW prohibitions apply.[6] In the version finally adopted the resolution went to extremes of caution and used the expression "international armed conflicts".[7]

It would be wrong to regard the question of the field of application of the customary prohibition as being finally settled at the present time. Nevertheless, there is no doubt that the above expression, "international armed conflicts", considerably understates that field of application. However reluctant some states may be to admit it, and whereas it does not seem possible to specify a sharp and consensual distinction between internal war and police operations, nevertheless there is a considerable body of evidence whose cumulative weight strongly suggests that the customary prohibition of the use of CB weapons binds states, also in respect of conflicts which are not between states and of internal conflicts. It may be noted in particular that in so far as the application of the law of war is concerned, "wars of national liberation" are, according to general practice, regarded as international wars, even though they are not between states.

First, it is a generally accepted principle that the rules of the international law of war which concern *weapons* also apply in conflicts not presenting an international character. This is related to the fact that these rules are normally regarded as having a humanitarian character and as being imposed by general standards of civilization. For example, a resolution adopted by the *Institut de droit international* at its Zagreb session in 1971 includes among "humanitarian rules of the law of armed conflict ... those prohibiting the use or some uses of certain weapons [and] those concerning the means of injuring the other party ...". [7] UN General Assembly resolution 2444 (XXIII) on the subject of "human rights in armed conflicts" adopted unanimously on 19th December 1968 demands

[6] On the way in which states may overreact to such fears (and, in the case of the United Kingdom, have overreacted), see Volume V, pp. 45–46.

[7] The US delegate even questioned the propriety of this expression when the Protocol only spoke of "use in war" and "warfare", but he did not pursue the matter further. In any case it is difficult to imagine an "international armed conflict" which is not also a "war" in the sense of the Geneva Protocol, read in conformity with the object and purpose of that treaty.

"observance [of basic humanitarian principles] by all governmental and other authorities responsible for action in armed conflicts".[8]

Secondly, the existence of legal convictions regarding the application of the customary CBW prohibition to wars which are not between states follows in large measure from the formative elements of that prohibition itself—chiefly the moral repugnance which this form of warfare has given rise to: a sentiment which does not discriminate between the use of these weapons in international and in domestic wars. It is beyond doubt that common conviction proscribes the use in civil war of all biological weapons and of chemical weapons to precisely that extent to which their use in international war is forbidden by the customary rule. Nor does it seem that any state has ever claimed exemption from regulations regarding the use of otherwise prohibited types of weapons on the grounds that the conflict in question was not an inter-state conflict. Indeed, the rule prohibiting the use of CB weapons in war appears to be regarded as belonging to that "minimum standard" of international law which is to be applied even to conflicts, not of an international character, and perhaps even in cases where the parties do not recognize each other as belligerents.

As regards the practice of states in cases of civil war, past experience is somewhat limited and would perhaps not of itself be conclusive. There are cases of major internal conflict—the Spanish, Chinese, Greek and Nigerian civil wars, for example—in which CB weapons were not used,[9] although they could conceivably have been employed successfully. Belligerents in these and similar conflicts seem to have taken it for granted that the prohibition of CBW applied. Whether or not there is a practice—at least as regards CB weapons in the modern sense—which has had time to assert itself is perhaps questionable; but the general conclusion, that custom prohibits resort to chemical and biological means of warfare even in armed conflicts of a domestic nature, is no doubt correct, even if its demonstration in terms of legal doctrine still poses certain problems, similar in kind to those attendant upon any universal norm which is predicated to apply also in the internal affairs of individual states.

In reality the question is not whether the field of application of the customary prohibition extends beyond cases of "international armed con-

[8] (First operative paragraph.) The prohibition of the use of CB weapons in war is not explicitly included among the principles by which, according to this paragraph of the resolution, such authorities are bound. Implicitly, however, it seems to be, for elsewhere in the same resolution an association is made between basic humanitarian principles applicable "in all armed conflicts" and "the prohibition and limitation of the use of certain methods and means of warfare" (operative paragraph 2) and "the Geneva Protocol of 1925" (operative paragraph 5).

[9] Or not used on any substantial scale; cf. allegations of singular instances of CW during the Chinese, Spanish and Greek civil wars in Volume I, pp. 142, 146–47 and 157.

flict". Both the practice of states and common legal conviction show that it does. The real difficulty is to separate insurrection and civil war from cases which are genuine police-type operations. Several attempts have been made to codify this distinction. A report of the International Committee of the Red Cross (dealing not with CB weapons, but with the protection of victims of non-international conflicts) uses the phrase "armed conflicts in which armed forces are engaged in hostilities" [8]. A more recent Draft Protocol by the same body and on the same subject refers to "hostilities of a collective nature ... between organized armed forces under the command of a responsible authority" [9]. Both formulations clearly encompass civil war, but not, for instance, riot control and the repression of banditry.[10] However useful, such efforts towards reaching generally acceptable definitions, cannot, of course, be said to express the present state of positive law.

However obvious it may be, it should be recalled that the prohibition of the use of CB weapons in war does not, and cannot, affect the legal status of the use of the same materials for civil purposes such as the use of herbicides in agriculture and forestry or of irritant-agent weapons by domestic police forces. Nor, of course, can the legality of the latter uses under domestic law exculpate these dual-purpose agents from such prohibitions as may apply to their use in warfare. These situations have very little in common in fact, and nothing at all in law.[11]

II. *Forms of warfare*

It must first be stressed that aside from the question of reciprocity which is dealt with later, the prohibition of the "use in war" of CB weapons which the Geneva Protocol enunciates is absolute and unconditional. This results first of all from the generality of the expression in the Geneva

[10] In this and other volumes of this study, the term "CB warfare" refers to the use of CB agents (defined in footnote 1, p. 13) for hostile purposes in armed conflicts in which armed forces are engaged in hostilities. While cumbersome, this definition has the advantage of including civil war while excluding normal police operations, even when they are conducted under conditions of war. So-called police operations in Viet-Nam, in which chemical weapons are used for hostile purposes, constitute chemical warfare according to this definition.

[11] See on this point Chapter 3, especially pp. 57–59. It is probably impossible to specify in the abstract precisely where the borderline between police use and use in warfare is located, not least because it depends on the recognition of the insurgents as belligerents. While this situation has serious consequences for the susceptibility of the CBW prohibition to erosion (see Volume V, pp. 41–47) it is of no importance for the present discussion. For most cases which are likely to be of practical importance it is obvious whether they are of one kind or the other.

Protocol: the use "*in war*". It also results from one of the most important principles of the law of war: the principle of the *equality of belligerents under the law of war*. The absolute nature of the prohibition forbids any discrimination between wars of aggression and wars of self-defence, as well as any distinction between the use of CB weapons for offensive and for defensive purposes, or for "strategic" or "tactical" purposes. Needless to say, the customary rule would similarly prohibit the use of CB weapons by a United Nations force as some have suggested. [10–11] Nor can the "passive" character of certain potential uses be invoked in their defence: establishing a chemical barrier in a certain area of one's own territory in order to prevent penetration by the enemy is no less a violation of the law than is a direct CB attack on his armed forces.

Under the Geneva Protocol, as under the customary rule, the only employment of the prohibited weapons that may be legitimate is for reprisals in kind. This is discussed in Chapter 6, but it may be noted at this point that, as a result of this, the possession of CB weapons cannot legally perform a function of *general* deterrence against aggression carried out with conventional or nuclear weapons. Apart from the trivial case of those kinds of CB weapon, such as irritant-agent weapons and herbicides, which can perhaps be construed to fall outside the scope of the customary prohibition—weapons which in any case are not of much use in deterrence—the possession of CBW agents can only exercise a *specific* deterrence based on the right of reprisals in kind.

In the deliberations of the First Committee of the UN General Assembly prior to the adoption of the resolution of 5 December 1966, there was an evident tendency to associate from the legal standpoint CB weapons with the concept of weapons of mass destruction. This found expression in the wording of the second preambular paragraph of the resolution.[12] The same tendency is found (albeit in a context which does not directly relate to the law of war but to the law of disarmament) in the biological weapons disarmament convention of April 1972.[13] Preambular paragraph 7 of the convention, in which this association of CB weapons with the concept of weapons of mass destruction is found, was reiterated *verbatim* in resolutions 2826 (XXVI) and 2827 (XXVI) adopted on 16 December 1971 by the UN General Assembly. These references to weapons of mass destruction can be interpreted—and some of the delegations presumably intended them to be understood in this sense—as meaning that the prohibition of the use

[12] See appendix 3, p. 166.

[13] Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction. See appendix 4.

of CB weapons concerns those weapons as being, and because they are, weapons of mass destruction.

In fact, the expression "weapon of mass destruction", as well as the idea behind it—at least in the meaning it is given today—is of recent origin. It only came into use after World War II. Any association between this concept and the Geneva Protocol is not justified and reflects an inaccurate understanding of the basis of the prohibition of CBW.

Because of their intrinsic properties, and given current dissemination methods, biological weapons and, though to a lesser extent, some at least of the known chemical weapons appear to be primarily suited for mass destruction purposes. But for neither biological nor chemical weapons is use on a large scale a quantitative condition of *prohibition,* either as regards their effects, or as regards their methods of dissemination.

The wording of the Protocol, as has been noted, was taken from Article 171 of the Treaty of Versailles, which had been conceived on the basis of the use of combat gases during World War I. These combat gases cannot be described as weapons of mass destruction, at any rate not in the modern sense of this expression. The claim of an association of CB weapons with weapons of mass destruction is thus contrary to both the letter and the spirit of the Geneva Protocol. It corresponds to an extremely restrictive interpretation of that treaty.[14]

Some of those who are inclined to think of the prohibition as applying only to the systematic use of CB weapons on a large scale may have been influenced by the phrases "chemical warfare" and "biological warfare". In contrast to these expressions, the terms actually used by the Geneva Protocol—the "use in war" of chemical weapons and "bacteriological methods of warfare"—do not suggest the systematic use of chemical or biological methods of warfare on a large scale.

[14] It is therefore particularly confusing that the expression "weapons of mass destruction" should have appeared in the Hungarian draft which became the basis for the 1966 UN resolution. It corresponds to an even more restrictive interpretation of the CBW prohibition than that which seeks to exclude irritant-agent weapons and herbicides from the prohibition—a restrictive interpretation which this particular draft resolution was precisely meant to oppose (Volume IV, pp. 238–39). The expression "weapons of mass destruction" was deliberately kept out of the 1969 21-power resolution (Resolution 2603 A (XXIV); see appendix 3).

Chapter 3. The Geneva Protocol

I. *Extent of ratifications and accessions*

By the end of 1972, the total number of parties to the Geneva Protocol was 89.[1] The only important country which is not a party to this treaty is the United States, and even that country is envisaging ratification.[2] Other states which are not parties include a number of African, Asian and Latin American states. The United States, Albania and the Philippines aside, all NATO members, all Warsaw Pact members, all major industrial nations, all European nations and all SEATO members are parties to the Protocol.

A list of parties, complete up to and including 1971, is given in appendix 2. A notable feature is the very large number of new ratifications and accessions in the course of the five years ending 1971. During that period, the number of parties rose from about 50 to about 90. Those states which have not formally ratified or acceded to the Protocol are almost all of relatively little military significance. For political purposes it is hardly an exaggeration to say that the treaty is today almost universal in extent.

The list in appendix 2 only comprises those states which are formally and explicitly parties to the Geneva Protocol by ratification or accession or by virtue of a statement of continuance or of explicit succession agreements.

In addition to the 88 powers which are bound by the Protocol itself, four countries of Central America—Costa Rica, El Salvador, Guatemala and Nicaragua—are bound by the Convention for the Limitation of Armaments of Central American States of 1923 which contains a prohibition of the use of chemical weapons in its Article V which is similar to the prohibition enunciated in the Geneva Protocol. (See appendix 1 and appendix 2, note 1.)

As regards former protectorates and colonies, the question arises as to whether, without having declared their accession or continuance, these new states are bound by the Protocol.

[1] From this total are excluded Estonia, Latvia and Lithuania, now republics in the Soviet Union. Germany and China are counted only once each in the total: the governments of the Federal Republic of Germany and the German Democratic Republic and the governments of China and Taiwan consider themselves bound by the Protocol.

[2] The Protocol was forwarded to the US Senate for its advice and consent to ratification on 19 August 1970, but the procedure was subsequently delayed by differences arising over the interpretation of the treaty. (See Volume V, pp. 72–73.)

Legal doctrine admits in general that multilateral agreements of a normative character and, in particular, agreements usually classified as humanitarian—characteristics which apply to the Geneva Protocol—are inherited by successor states without any need for a statement of new accession or even of a declaration of continuance. However, practice is far from being firmly established in this field, even for the most typically humanitarian agreements, the four Geneva Conventions of 1949.

After becoming independent, some of the new states have notified the French Government, depositary of the Geneva Protocol, that they consider themselves bound by the Protocol. Others have declared their substitution to the rights and obligations of the former colonial power. A third group chose the procedure of new accession. Finally, some have notified the Secretary-General of the United Nations of their continuation to the treaties concluded by the power formerly responsible for their administration. From this practice, however, one cannot deduce that adherence to the Protocol presupposes at least a statement of continuance.

The French Government is of the opinion that it is not entitled to interpret a general statement of continuity by a country attaining independence as signifying that that country is bound by the Geneva Protocol.[3] The French Government's notifications of ratifications, accessions and successions presumably therefore give an incomplete picture of the number of states which *consider* themselves to be parties.

The practical interest of this problem is evident in the case of the two republics of Viet-Nam, which have never notified their accession nor issued a statement of continuance. In the discussions of the First Committee of the UN General Assembly, prior to the adoption of the 1966 resolution on CBW, the speakers seemed to take it for granted that the Protocol applied to the conflict in Viet-Nam. They therefore implicitly applied the theory of tacit continuance. The attitude of the two Vietnamese Governments themselves on this problem is not known. The position of the Yemen, another country in which chemical weapons have allegedly been used, was also not known when allegations were first made.

In the case of a statement of continuance (and also in the assumption of tacit continuance), one may further ask whether any reservations which the former colonial power made upon ratification would automatically apply to the successor state, even if not formally renewed. As regards this question of the *transferability of reservations,* it could perhaps be argued

[3] Letter from the French Embassy in Stockholm, dated 26 August 1970, and quoted in the *SIPRI Yearbook of World Armaments and Disarmament 1969/70* (Stockholm: SIPRI, 1970), p. 439.

that in the case of the Geneva Protocol the reservations, being unilateral restrictions of the multilateral normative character of the treaty, cannot be presumed to be transferred to a successor state without a formal declaration to that effect. In legal doctrine, however, it is the opposite solution which has prevailed: in the absence of a statement to the contrary, a statement of succession is regarded as encompassing both treaty and reservations. Had this not been the case, conventional law obligations could have existed for which no consent had been given.[4]

As a matter of fact, however, the reservations in question have lost most of their importance today, following the development of a customary rule similar in content to the Geneva Protocol.[5] In the case of new accessions, a reservation of the tenor of those many countries made in the inter-war years should probably be held to be inadmissible on the grounds that it runs counter to the objects and purposes of the treaty.[6] To the same extent that this is the case, the rights and obligations accruing from a declaration of substitution are unaffected by the reservations the former colonial power may have made. At any rate, it is likely that the problem of the transmission of reservations simply did not occur to the governments submitting statements of continuance.

The growing publicity in recent years around the problems and dangers relating to chemical and bacteriological weapons—stimulated, not least, by the open use of chemical weapons in Viet-Nam—has led to increasing efforts by international governmental and non-governmental organizations alike toward securing the adherence of all states to the Geneva Protocol. One example is the resolution passed by the twentieth International Conference of the Red Cross in 1965. [12] Following up on this, in July 1966, the International Committee of the Red Cross invited the governments of 80 countries which were not yet formally bound by the Geneva Protocol to accede to it. [13] Since then the main impetus has come from the sustained efforts of the UN General Assembly, particularly from the resolutions of 1966, 1968, 1969 and 1970 which called for ratification by all states which had not yet done so. As a result of these and other efforts, a number of governments have in recent years notified their accession to the French Government, or have made known their intention to accede to the Protocol, while some new states have filed, or stated their intention to file, declara-

[4] Article 9(1) of the Draft Articles on Succession with Respect to Treaties that are now being prepared by the International Law Commission states that a notification of succession is to be taken as maintaining any existing reservations, unless the successor state declares otherwise or the reservation is only appropriate to the former state.

[5] See pp. 79 ff.

[6] In recent years such reservations have nevertheless been made by a few countries. See p. 85 and appendix 2.

tions of continuance by the terms of which they consider themselves as bound by the ratification by the former colonial power.

II. *Interpretation of the Geneva Protocol*

The two main problems which must be dealt with in order to determine the precise extent of the prohibition formulated in the Protocol are:
1. Whether the words "asphyxiating, poisonous or other", which appear in the definition of the prohibited weapons in the Protocol, cover incapacitating agents in general and irritant agents in particular; and
2. Whether attacks against animal and plant life are covered by the prohibition.

A final question concerns the application of the Geneva Protocol to incendiaries and smoke-producing agents.[7] As regards this point, it is generally admitted that the Protocol does not prohibit the use of such agents in war. This exclusion from the provisions of the Protocol does not derive from the wording of its definition of CW, which is sufficiently unclear to suggest that it could be extended to such agents.[8] It results from accepted usage, entirely independent of the interpretation of the Protocol. It is important to note that this is *not* a case in which one form of CW is exempted from the general prohibition; rather, what is involved is a means of warfare not normally conceived of as CW.[9]

Smoke-producing agents, unlike chemical weapons in the sense universally given to that term, are not normally used against human beings, either directly to injure their health or cause their death, or indirectly in order to affect vital sources. Besides, it is the physical (optical) effect of the

[7] Two other problems of interpretation, relating to the definition of a situation of war, and relating to the present validity of the reservations to the Protocol, are considered elsewhere. (See chapter 2 above, and pp. 79–89 below.)

[8] In particular napalm, which is an incendiary, might be thought to come under the ban of the Protocol, since it sometimes kills by asphyxiation (when the flames of the napalm suck up the oxygen in underground bunkers and tunnels). Similarly, the poisonous effects of white phosphorous on the target organism may be as important as its thermal effects.

[9] There are a few exceptions—of no legal importance whatsoever—to this general practice. A French Army directive, for instance, includes incendiary agents, smoke pots and artificial fog under the heading of chemical weapons in addition to "combat gases" [14]. (The latter is a comprehensive term since, according to the directive, "combat gases" are released in the atmosphere in gaseous, aerosol, liquid or solid form [15].) At least one US source, dating from 1959, follows the same practice, defining chemical warfare as "the intentional employment of toxic gases, liquids or solids to produce casualties and the use of screening smoke or incendiaries" [16]. A resolution of the 1968 Teheran Conference refers to "chemical and biological means of warfare, including napalm bombing" [17].

smoke that is intended, not its toxic effect, if any. Similarly with incendiaries: it is the fuel, not the action, which is chemical, since the action consists (primarily) in the physical effect of the fire.

Consonant with this, the report of the Committee of Experts appointed by the UN Secretary-General pursuant to General Assembly resolution 2454 (XXIII) stated:

> that there is a dividing line between chemical agents of warfare, in the sense in which we use the terms, and incendiary substances, such as napalm and smoke, which exercise their effects through fire, temporary deprivation of air or reduced visibility. We regard the latter as weapons which are better classified with high explosives than with the substances with which we are concerned. [18]

Napalm, other incendiaries and smoke-producing agents are not chemical weapons *per se*. To affirm this is not to claim that their use may legally be resorted to. In some cases, namely those in which the principal effects sought are asphyxiation or poisoning, they would come under the ban of the Protocol. In other cases, their use may contravene other rules. Opinions differ on the extent to which this is the case.[10]

Having disposed of this side-issue, we may return to the two main questions: those which concern irritant agents and antiplant agents. Both are of acute practical interest today and will be discussed in detail below. The problems they raise seem to have been only partly realised by the authors of the Geneva Protocol. This is particularly true of the possibility of chemical attack upon plants. The authors of Article 171 of the Treaty of Versailles had, however, chosen a definition of chemical weapons which was as comprehensive as possible, and so conceived that it would expand as the need arose and would include all chemical agents which might later be created, and this definition was taken over *verbatim* by the authors of the Geneva Protocol.

This all-inclusive and forward-looking character of the definition of

[10] Some authors hold that incendiary antipersonnel weapons are forbidden by the St. Petersburg Declaration and by Article 23 of the regulations annexed to the Fourth Hague Convention (cf. appendix 2) in view of the atrocious suffering they cause [19]. Less convincingly, Greenspan adds that they also come under the St. Petersburg Declaration's prohibition of small projectiles which are explosive or charged with fulminating or inflammable substances [20]. Others maintain that provided they are used against *military* objectives (their use against *civilians* is of course prohibited, even though that prohibition has often been violated), they do not contravene any prohibitions and easily pass the general requirement of proportionality (cf. p. 145, below): the suffering they cause is therefore not "unnecessary". It is also often stated that, whereas incendiaries were considered illegal before World War II, their extensive use since then means that they are now to be regarded as legitimate weapons of war [21–23]. The most common view is probably that of McDougal and Feliciano, who consider that with flamethrowers and napalm bombs "the nature and situation of the target would seem the factors of decisive importance" [24].

the weapons, the use of which is prohibited by the Protocol, stems both from the wording of the definition of chemical weapons and from the definition—or rather from the absence of a definition—of biological weapons. The expression "bacteriological methods of warfare" is of extreme generality. Biological weapons were more anticipated than known in 1925. A weapon of the *future* was therefore prohibited, and it was prohibited without restriction, without reservations in anticipation of any developments of which such a weapon might be capable, and evidently in awareness that common bacteria exist which only produce temporary incapacitation in humans and that other bacteria can destroy animals or plants. We shall often return to this forward-looking and comprehensive spirit which guided the authors of the Geneva Protocol, because it is of extreme importance in interpreting the Protocol.

A considerable part of the confusion surrounding the interpretation of the legal prohibitions of CBW can be attributed to a failure to distinguish clearly between those facts which are pertinent to the interpretation of a *convention* and those which affect the scope of a *customary rule.* In the case of a convention, the relevant factors to examine are: first, "the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose" [25]; secondly, if required, the subsequent practice of the parties may be taken into account as indicating their agreement on the interpretation of the treaty; and thirdly, as a supplementary means of interpretation, one may turn to the preparatory work of the treaty and the circumstances of its conclusion [26]. It is particularly important to note that only the practice of the *parties* to the treaty matters, for if the acts and statements of the United States, which is not a party to the Geneva Protocol, are disregarded in interpreting this treaty (not, of course, in interpreting the customary rule), the ambiguity which supposedly attaches to that treaty largely disappears.

Agents and ailments to which the Geneva Protocol applies

The most important problem in regard to the interpretation of the Geneva Protocol, and the main difference between the advocates of the extensive and the restrictive interpretations of that treaty, is whether it prohibits the use in war of irritant agents (tear gases and some other "riot-control" or "police-type" agents such as CS). This problem is of acute political importance for two reasons. The first is that the United States may soon accede to the treaty and may attempt to do so without altering its present advocacy of the restrictive interpretation of the Protocol, the interpretation according to which irritant agents, or some of them, are not prohibited by

that treaty (nor by the customary prohibition).[11] Since a considerable majority of the parties to the Protocol adhere to the extensive interpretation, this would introduce an element of uncertainty into this treaty. This problem is of course compounded by the fact that it is far from being a purely academic question: the United States has for some time been using irritant agents in war. Upon ratification by the USA, the question of the legitimate or illegal character of such use under the Protocol would gain immediate practical importance.

The second reason is that, since the issue was actualised by the US use of irritant agents in Viet-Nam, a few other states which are already parties to the Protocol, namely the United Kingdom and Australia, followed suit and, reversing their previous position on this matter, declared that in their view certain irritant agents do not come under the prohibition of the Protocol. The present situation is therefore one in which incompatible interpretations confront one another. As a consequence of this disagreement, a few states have taken the position that both the extensive and the restrictive interpretations are *possible,* without, however, going so far as to advocate the restrictive interpretation themselves.

The wording of the Protocol itself is awkward enough to leave room for both interpretations, but, as we shall see, further consideration of the pertinent facts leaves no doubt that the extensive interpretation—the interpretation according to which *all* chemical and biological weapons are prohibited when they are used against human beings, whatever their degree of harmfulness and however transient their effects—is the correct interpretation.

In this volume we are only concerned with the legal issues in the narrow positivist sense of determining what the law says. Other questions which need to be considered when judging the *desirability* of the extensive and restrictive interpretations, respectively, are dealt with in other volumes of this study. The question of the likely viability of prohibitions of the extensive and restrictive varieties respectively, is dealt with in Volume V, chapter 1.

To simplify the following discussion, it is most convenient to consider biological and chemical weapons separately because they are differently described in the Protocol. As we shall see, however, the end result is that the rule has the same content in both cases.

First, in regard to the *nature of the prohibited biological weapons,* it should be stressed that, beyond any doubt, the prohibition of "bacteriological methods of warfare" as contained in the Geneva Protocol must be understood as a prohibition of *biological* methods of warfare—in other words,

[11] See Volume V, particularly pp. 68–72.

of *biological weapons.* Even though in its strict scientific meaning the term "bacteriological" is narrower than the term "biological", it has always been accepted that in the *legal* context of the Protocol the two words are exact synonyms. In most texts the matter is taken for granted and the question not even raised.[12]

The prohibition of "bacteriological" weapons was added to the Versailles–Washington formulation of the prohibition of CW at the request of the representative of Poland [30], but this addition did not give rise to much discussion at the conference which drafted the Geneva Protocol. Nevertheless, it is evident from the proceedings that no one intended to restrict the scope of the prohibition by using this particular word, and that what the delegates intended to prohibit included bacterial and other microbiological agents alike.[13] In a similar way, the expressions "bacteriological weapons" and "biological weapons" have always been used interchangeably in disarmament negotiations, both before and since World War II.

Insofar, therefore, as the *biological nature* of agents is concerned, the absolutely general character of the biological weapons envisaged by the prohibition does not appear to be open to dispute. Another question concerns the *effect* on human beings of particular BW agents. Basing oneself on the wording of the Protocol—"agree to extend *this* prohibition to the use of bacteriological methods of warfare"—can it not be claimed that the definition of biological weapons should be qualified by whatever interpretation is given to the definition of chemical weapons? This reasoning would hold that what is not forbidden by the Protocol as regards chemical weapons, and what was not forbidden by the pre-existing rules on which the Protocol was based, cannot be prohibited either as regards biological weapons.

Such an interpretation can only arise from a highly specious reading of the Protocol. It presupposes that a certain category of "chemical methods of warfare" is given, the use of which is *partly* limited by regulations as expressed in the Protocol, and that these regulations are transferred unaltered to another *category,* that of "bacteriological methods of warfare". It is difficult to extract such a meaning from the text of the Protocol. Instead, what the Protocol seems to express is that there is a category

[12] Brungs, who is more explicit than most, says that the Geneva Protocol "specifically prohibits biological warfare by name" and adds in a footnote: "Although the Protocol uses the term 'bacteriological warfare' [*sic*]". [27] From the negotiation history, Bunn concludes that "there ... is no justification for limiting the scope of the ban on 'bacteriological warfare' because some new diseases have been discovered since 1925 which we do not classify as bacteriological" [28]. Cf. to the same effect the statement by US representative Foster [29].

[13] See Volume IV, chapter 2.

of prohibited chemical weapons (whether it is comprehensive of all chemical weapons is immaterial here) and that "bacteriological methods of warfare" are added to that category. Read in this way, any exclusion of particular *agents* from the prohibition of chemical weapons would not cause "similar" agents to be excluded from the prohibition of biological weapons, without an explicit statement to that effect.[14]

At any rate, the argument that the prohibition of biological weapons cannot have a larger extent than that of chemical weapons is meaningless unless a *restrictive* interpretation of the legal definition of chemical weapons is adopted. As we shall see, such an interpretation is itself very hard to maintain and was certainly not intended by the authors of the Protocol.

Let us turn, therefore, to the argument which would exclude some or all irritant-agent weapons, and possibly some incapacitating-agent weapons as well,[15] from the definition of chemical weapons. This restrictive interpretation of the Geneva Protocol rests on the assumption that irritant agents are *not injurious to health*. For the purpose of this discussion, let us assume that this is true.[16]

Without this assumption the problem could not have arisen: the irritant agents (at least the gases) would already have been prohibited by virtue of the spirit, if not necessarily the letter, of the Hague Declaration of 1899 prohibiting the use of projectiles the sole object of which is the diffusion of gases which are injurious to health ("deleterious gases")[17] or under

[14] Such a statement would have appeared as a qualifying phrase preceding the expression "bacteriological methods of warfare".

[15] The term *irritant agents* (or harassing agents), which includes tear gases and certain other agents such as CS, refers to chemicals which can irritate the eyes, nose, throat, lungs and skin intensely and thus disable people who remain exposed to them, but the effects of which soon pass if excessive concentrations are not used. *Incapacitating agents* cause temporary disablement for much longer periods (of the order of a few days). This may take the form of paralysis, for example, or temporary blindness. *Casualty agents* comprise (in addition to incapacitating agents) lethal agents and other agents causing permanent injury. It is to be noted that the distinction between these classes of agent depends at least as much on the way in which they are used as on the intrinsic properties of the agents. Used in sufficient quantity, irritant and incapacitating agents can produce death. The categories have no sharp boundaries but are simply bands in a continuous spectrum of toxicological and pathological effects. (See also Volume II.)

[16] This may be thought of as either a matter of fact, or a matter of definition. On the toxicological and pathological effects of irritant agents, see Volume II.

[17] Legal opinion is divided on the question as to whether irritant non-toxic gases are prohibited by the Hague Declaration, not by divergent interpretations of the text, but for reasons of fact. Kunz [31] and Meyer [32] are of the opinion that such agents do not enter into the definition of deleterious gases. Overweg [33] and Riesch [34] are of an opposite opinion. According to the last two authors, the issue of whether irritant gases are or are not capable of injuring the health is a question of fact. Used in certain ways these agents can be very harmful. (See Volume II of this study.)

Article 23 (a) of the Hague Regulations of 1907 prohibiting the use of poison and poisoned weapons.

The wording of the Protocol

From the scientific as well as the grammatical point of view, the Versailles–Washington–Geneva formula is very awkwardly expressed. Instead of stating clearly that the prohibition covers chemical agents in the gaseous, liquid or solid state, the definition mentions gases and liquids but designates the solids under the general term "materials"—a term which actually applies to all chemical substances regardless of their physical state. The word "devices", which has in this case the sense of inventions (in the French text: *procédés*), is added. From the grammatical construction, this word cannot mean procedures of dissemination, about which the definition says nothing—an omission which can only mean that the prohibition includes CBW agents regardless of the method of use of such agents.

Perhaps the word devices is not so superfluous as it might appear from the above considerations. In 1915 a German paper denied that Germany had violated the Hague Declaration at Ypres, since the gas had been released from cannisters and not from projectiles.[18] It is possible that in 1919, fear of similar future violations in spirit, if not in fact, prompted the authors of the Versailles Treaty to use the expression "gases and ... all analogous liquids, materials or devices" instead of some such single word as "substances". It *could* be claimed, for instance, that from a strictly formal point of view an aerosol, which is a suspension of solid particles or liquid droplets in air, is neither a gas nor a liquid, a material or a substance; but this suspension would certainly be covered by the term "device". At any rate, it is clear that this word marks once more the intention of the authors to give to their definition a comprehensive and open-ended character.

The adjectives used in the definition are the real source of difficulty. First mentioned are the "asphyxiating" and "poisonous" gases (in the French text: *asphyxiants* and *toxiques).* By definition, an asphyxiating gas is a poisonous gas having a choking effect. The adjective "poisonous" is the general term which includes chemical substances having a toxic effect in general, whether choking, blistering, irritating or otherwise. [35] In its ordinary meaning, the word "poisonous" means injurious to the health or causing death. It does not imply that the injury to health must be of any particular degree of seriousness or duration. It is incontestable that irritant agents constitute, medically, an injury to the health—the normal

[18] See Volume I, pp. 232–33.

physiological and psychological conditions—of the individual affected, even if that injury is benign and of short duration. In this ordinary meaning, "poisonous" is the same as the French word *toxique* and both are synonyms of the English word "toxic". It is therefore reasonable to assume that this is the authentic meaning of the word "poisonous", as it appears in the Protocol, for even though the word "poisonous" could, perhaps, be interpreted in a narrow sense, this is not so with either the French *toxique* or the English "toxic".[19]

If this interpretation, based on the ordinary meaning of the word "poisonous", is accepted,[20] then it is clear that the Protocol encompasses all irritant and incapacitating agents in its prohibition, and one need go no further. If, on the other hand, this interpretation of the word "poisonous" is rejected, or if it is held to be insufficient to include "harmless" forms of irritant and incapacitating agents in the definition of chemical weapons, one must revert to the text of the Protocol.

After the adjectives "asphyxiating" and "poisonous", the definition adds the words "or other" (in the French text: *ou similaires*). Authors who interpret the adjective "poisonous" as meaning "*highly poisonous*" or "*poisonous enough to cause decided injury to the health*", insist that the words "or other" should be understood in the same sense as the adjective "poisonous" thus interpreted. In that way, these words would add nothing to the definition, unless it be to suggest some still unknown chemical substance which would act as a poison without being a poison in the pharmacological and medical sense of the term. Actually, it seems that the words "or other" are of little use unless they add something to the list, not of *substances* which could be used as weapons, but of properties, i.e., of *physiological effects* of such substances. The particular something is not clearly stated because it *could not* be clearly stated and any clarification would tend to make the definition a closed one, while the authors of the Protocol wanted to leave it open.

One can only conclude—and this conclusion is valid both for biological weapons and chemical weapons—that the injury, in other words the nature and degree of the effect on the health, required by the definition is not greater than that which is necessarily implied, in fact and in law, by the concept of a weapon. That injury is the reason for the existence and the military utility of such weapons; it is what makes them means of injuring an enemy, "methods of warfare".

[19] Accordingly, a US Army field manual defines the term *toxicity* as "the property of an agent to produce death or incapacitation" [36].

[20] According to the 1969 Vienna Convention on the Law of Treaties, treaties are to be interpreted "in accordance with the ordinary meaning to be given to the terms of the treaty in their context and in the light of its object and purpose" (Article 31).

Does this interpretation deprive of all its usefulness the mention of the asphyxiating and poisonous properties with which the definition of chemical weapons begins? No. Those adjectives serve to limit the definition by excluding from it weapons which are technically of a chemical nature, but which, according to general usage, are not included in the definition of CW, such as smoke-producing agents and antilubricants.[21]

The English and French texts of the Protocol are both authentic, but while the English text says "asphyxiating, poisonous or *other* gases" (emphasis added), the French text says *ou similaires*. It is mainly on this point—the relative narrowness of the ordinary meaning of *similaires*—that those who defend the restrictive interpretation rest their case. As is noted above, the French *toxique* is broader in meaning than the English "poisonous". The restrictive interpretation, therefore, has to base itself on the English text for the word "poisonous" and on the French text for the word *similaires*.[22]

There is reason to believe that even without the obvious difference in meaning between the French words *ou similaires* and the English words "or other", the clash between a broad interpretation and a restrictive interpretation would anyway have arisen.[23] Regardless of the term adopted in the French text, the restrictive interpretation would have spontaneously taken the word "other", not in the sense of "different", but of "like". Thus, in the final analysis it is not certain whether this is a problem of interpretation arising from the comparison of two authentic texts of a treaty, or whether it is, instead, an ordinary problem of treaty interpretation.[24]

[21] The possibility that without this phrasing the prohibited chemical agents could have been understood in a wider sense is not as remote as may appear. In Annex II to Protocol No. III of 23 October 1954 are defined the chemical weapons which the Federal Republic of Germany undertakes not to manufacture on its territory. These comprise, in addition to asphyxiating, toxic, irritant, paralysant and growth-regulating chemical substances, those that have antilubricating or catalysant properties (see Volume V, p. 197).

[22] There is reason to warn against putting excessive reliance on a close reading of a text which was probably not written with a corresponding concern for detail. An early US draft for the text of the prohibition which later became the Geneva Protocol spoke of "asphyxiating, toxic or deleterious" agents instead of "aspyhxiating, poisonous or other" (see Volume IV, pp. 60–61) and, in speaking of the convention to be concluded, the recommendation of the military committee of the Conference on the International Trade in Arms simply referred to it as "the prohibition of chemical and biological warfare" [37].

[23] In the US Senate debate prior to the ratification of the Treaty of Washington, Senator Wadsworth gave another interpretation of the difference between the words "other" and "*similaires*". He maintained that, strictly speaking, the English version prohibited the use of *any* gas in war (including, for instance, gases for balloon-filling), whereas the use of the word "*similaires*" in the French text "tied the matter up". [38]

[24] Bunn, in a recent study [39], attempts to demonstrate that the word "other" in the Versailles Treaty has the meaning "like" by noting that in an early English-language draft the word "similar" was used instead of "other", and by asserting that there is no

If taken in their ordinary sense, the words *ou similaires* and "or other" do not in themselves appear ambiguous or obscure in either of the two authentic texts taken alone. The ambiguity only arises when they are compared. In the abstract, disregarding, that is, the object and purpose of the treaty, the contradiction could be resolved just as well by giving the meaning of *other* to the French adjective *similaire* as *vice versa,* the two texts being reconcilable in either of these two ways. On this basis it seems justified to claim that, from the point of view of the wording of the Protocol, a case can be made in good faith for a restrictive interpretation by virtue of which only CW agents which are asphyxiating, poisonous or "other" (in the sense of like) are prohibited—an interpretation, therefore, which holds that it is permissible to use in war certain agents which render the victim unable to perform normal military duties for a longer or shorter time, but which have no serious physiological aftereffects. Even though there is nothing at all in the wording of the Protocol to lend positive support to such an interpretation, it cannot be conclusively ruled out solely on a reading of the text. Under such conditions one must refer, first, to the preparatory work and to the circumstances in which the treaty was concluded, and, second, to official statements by parties to the Protocol and other acts indicative of their interpretation of it.

Before doing so, let us note a particular difficulty which any attempt to interpret the Protocol restrictively must encounter: it is the question of *finding* somewhere a sharp distinction between those forms of CB warfare which are prohibited and those which are (supposedly) permitted, and of *demonstrating* by positive evidence that it is precisely this distinction which is legally imposed—whether by virtue of the wording of the Protocol or by virtue of the interpretations commonly given to that text. Were one to assume that the words "asphyxiating, poisonous or other" ("other" having the meaning "like") exclude irritant agents, no reason is perceived why they should not also exclude other agents, such as incapacitants, which (by assumption) are also not significantly harmful in a strictly physiological sense. Yet those who defend a restrictive interpretation seem to be of the opinion that incapacitating agents *do* come under the prohibition of the Geneva Protocol.

The main proponent of the restrictive interpretation is the Government

indication that any change in meaning was intended when the substitution was made. In fact, as noted by Baxter and Buergenthal [40], the *full* text of the draft reads "asphyxiating, poisonous or similar gases, any liquid, any material and any similar device capable of use in war are forbidden" [41]. In this form, the intention of comprehensiveness does not appear subject to doubt.

of the United States.[25] What precisely it believes to be exempted from the prohibition of the Protocol is not entirely clear. The prohibition is mostly described as a prohibition of "poison gas", and the exempted agents, variously as "tear gases", "riot-control agents"[26] or "police-type weapons". It is not all certain that there is any consistent official US view of the precise scope of the Protocol,[27] but it is clear that whatever other divergencies exist, incapacitating agents are generally held to belong to the prohibited means of warfare.[28] In the opinion of the British Government, CS appears to be the only agent the use of which is consistent with the Protocol. This is argued in terms of the low lethality of that substance ("except in exceptional circumstances" [44]), which is held to be less than that of certain smoke-producing agents. (As noted above, these are, however, not excluded from the prohibition of the Protocol by virtue of their low lethality, but because their main military purpose is an optical, not a chemical effect.) In either case, it seems impossible to find any evidence in the text of the Protocol suggesting that one, rather than another, restrictive interpretation is the authentic one.[29] Those who adhere to a restrictive interpretation are necessarily unable to specify the exact limits of the prohibition. As we shall see, however, this problem of where to draw the borderline has no practical importance—not, at any rate, in the case of the Geneva Protocol—since all CBW agents are comprised under its prohibition.

[25] Until the United States has acceded to the Protocol it has, of course, no right to interpret it authentically. After it has become a party it must either accept the interpretation reached by generally accepted methods of treaty interpretation or formulate an explicit reservation (which, however, must be compatible with the object and purpose of the Protocol).

[26] Note that CS, the most important "riot-control agent" is not a tear gas (see Volume II).

[27] The present view of the executive branch of the US Government was set forth in Secretary of State William Rogers' Report to the President, dated 11 August 1970: "It is the United States' understanding of the protocol that it does not prohibit the use in war of riot control agents and chemical herbicides" [42]. So far, however, the US Senate has been unwilling to endorse that view.

[28] This is consistent with (but not implied by) President Nixon's decision to renounce the first use of incapacitating chemicals [43]—cited in Volume V, p. 276.

[29] It will presently become clear that the authenticity of a particular restrictive interpretation cannot be derived from the negotiating history of the Protocol either. Nor can it be said to derive from subsequent interpretative statements and/or from a pattern of conduct which has come to be accepted as indicating the scope of the Protocol, for from 1930 until the use of irritant agents in Viet-Nam began, these weapons have not been used in war, openly, and in the conviction that they were exempted from the prohibition. Nor have they in that period been the object of official US or British statements to the effect that they are excluded from the Protocol. And, in the case of the United States, even if they had been, such acts or statements would have had no legal bearing upon the issue at hand.

The preparatory work and the 1930 declarations

The authors of the Protocol were satisfied with taking over the definition which had been used in Article 171 of the Treaty of Versailles, of which the French and English texts are equally authentic.[30] If the English-speaking authors of the Treaty of Washington—the United States and Great Britain —had felt that the words "or other" overstretched the concept they had in mind, they could have corrected the Versailles wording by using a more restrictive term. That possibility was still open to the states when they drew up and signed the Geneva Protocol. In fact, the scope of the prohibition was never discussed at the Geneva Conference and the records contain no reference to tear gases (which were well-known at the time) or to other irritant agents. As for the Treaty of Washington, the comprehensive intention of its authors already seems to follow from its title: "Treaty ... to Prevent the Use in War of *Noxious* Gases and Chemicals" (emphasis added). The meaning of noxious is "harmful" or "unwholesome", and the word does not suggest any great intensity of harm. The reason why the English-speaking states refrained from amending the Versailles Treaty text was simply that the English version corresponded to their intention.[31]

That is made evident in the case of the United States, and in so far as the Treaty of Washington is concerned, by a resolution unanimously adopted by the Advisory Committee of the US delegation to the Conference on the Limitation of Armaments. The Committee's report concluded as follows:

> Resolved, that chemical warfare, including the use of gases, *whether toxic or non-toxic*, should be prohibited by international agreement, and should be classed with such unfair methods of warfare as poisoning wells, introducing germs of disease, and other methods that are abhorrent in modern warfare. [47] (Emphasis added.)

On the same occasion the General Board of the US Navy filed a report with the US delegation which read:

> 5. Certain gases, for example tear gas, could be used without violating the two principles above cited [i.e., (1) that unnecessary suffering in the destruction

[30] As Baxter and Buergenthal remark, one should probably not attach much importance to the slight divergence between the French and English texts of Article 171 of the Treaty of Versailles. Article 172 of the same treaty required Germany to disclose to the allies "the nature and mode of all explosives, *toxic substances or other like chemical preparations* used by them in the war ..." (emphasis added). In the French text this is rendered as *"ou autres préparations chimiques"*. [45] Verbal precision was evidently not a major concern for the drafters, presumably because it was taken as self-evident that all four formulations referred to *all* chemical weapons without restriction.

[31] One of the arguments used against ratification in the US Senate was precisely that, in the view of the speaker, the Geneva Protocol *did* prohibit the use of tear gas in war. [46]

of combatants should be avoided, (2) that innocent noncombatants should not be destroyed]. Other gases will, no doubt, be invented which could be so employed; but there will be great difficulty in establishing a clear and definite demarcation line between the lethal gases and those which produce unnecessary suffering as distinguished from those gases which simply disable temporarily. Among the gases existing today there is undoubtedly a difference of opinion as to the class to which certain gases belong. Moreover, the diffusion of all these gases is practically beyond control and many innocent noncombatants would share the suffering of the war, even if the results did not produce death or a permanent disability. . . .

6. The General Board believes it to be sound policy to prohibit gas warfare in every form and against every objective and so recommends. [48]

Nevertheless, the action taken by the US delegation on those very clear opinions left the textual ambiguity unchanged. In spite of explicit reference to those opinions ("in the light of the advice of its Advisory Committee . . . and of the specific recommendation of the General Board of the Navy"), the chairman of the Washington Conference, the US Secretary of State, recommended that "the use of asphyxiating or poison gas be absolutely prohibited". [49] In its desire to facilitate the accession of the largest possible number of states to an agreement on that prohibition, the US delegation, in formulating the rule, went back to the text of Article 171 of the Treaty of Versailles, to which more than 30 countries were already parties. In spite of the wording chosen by the chairman, nothing in the documents and statements of the US representatives to the Washington Conference indicates that the delegation finally chose not to follow exactly the opinions and recommendations which have just been quoted, and to which the delegation had formally referred in presenting its proposal. Had the expression "asphyxiating or poison gas" been intended in a more restrictive sense, prudence would have dictated an unequivocal statement to that effect. It is therefore necessary to conclude that the proposals should be read "in the light of" those opinions and recommendations.[32]

Despite the fact that the above-mentioned reports had been presented to the conference and had been explicitly referred to by the US delegation, none of the other delegations present made any attempt to exclude irritant chemicals from the prohibition of Article 5. As Baxter and Buergenthal note, it is inconceivable that a government which believed that Article 5 did not outlaw all forms of chemical warfare would have failed to state its view to the conference. [50]

The implication that there was a consensus regarding the extensive inter-

[32] As noted, the United States *now* advocates a more restrictive interpretation of the Geneva Protocol (see p. 57). Recent changes in the attitude of the United States are, however, irrelevant to the interpretation of this treaty to which it is not a party.

pretation of the Protocol is confirmed by subsequent events. On 2 December 1930, the British delegation to the Preparatory Commission for the League of Nations Disarmament Conference submitted a memorandum concerning, among other things, the applicability of the Geneva Protocol to the question of the use of tear gases in war. The memorandum recalled that the Protocol contains a discrepancy between the French word *similaires* and the English translation of it as "other". It then declared:

> Basing itself on this English text, the British Government have taken the view that the use of "other" gases, including lachrymatory gases was prohibited. [51]

The memorandum stressed that it was highly desirable that a uniform construction should prevail as to whether or not the use of lachrymatory gases was considered to be contrary to the Geneva Protocol of 1925.

A Foreign Office minute from 1930, now rendered public, makes the point even more clearly. It expresses awareness of the fact that tear gases exist which are apparently harmless to health, and states the British position to be that the use of these gases is nevertheless prohibited under the Protocol (see below, p. 61).[33]

The French stand was made known on the same day in a special note, replying to the British memorandum. By its reference to pre-existing French military regulations, this reply shows that, even though it is the *French* text, and the French text only, which might be thought to lend support to a restrictive interpretation, the French Government never entertained any doubt regarding the applicability of the Geneva Protocol to "non-lethal" chemical weapons. The note stated:

> I. All the texts at present in force or proposed in regard to the prohibition of the use in war of asphyxiating, poisonous or similar gases are identical. In the French delegation's opinion they apply to all gases employed with a view to toxic action on the human organism, whether the effects of such action are a more or less temporary irritation of certain mucous membranes or whether they cause serious or even fatal lesions.
>
> II. The French military regulations, which refer to the undertaking not to use gas for warfare [*gaz de combat*] subject to reciprocity, classify such gases as suffocating, blistering, irritant and poisonous gases in general, and define irritant gases as those causing tears, sneezing, etc.
>
> III. The French Government therefore considers that the use of lachrymatory gases is covered by the prohibition arising out of the Geneva Protocol of 1925 or Chapter IV of the draft Convention.
>
> The fact that, for the maintenance of internal order, the police, when dealing

[33] The first indication of a change in the British attitude appears to be the 1970 declaration (see below, p. 60). It should be noted in particular that it was in accordance with the extensive interpretation that, around 1958, the legal branch of the British War Office ruled that the use of the irritant DM (Adamsite) was proscribed by the Protocol [52].

with offenders against the law, sometimes use various appliances discharging irritant gases cannot, in the French delegation's opinion, be adduced in a discussion on this point, since the Protocol or Convention in question relates only to the use of poisonous or similar gases *in war*. [53]

A number of other delegations declared their acceptance of the British interpretation. Among these, the Soviet Union, Romania, the Kingdom of the Serbs, Croats and Slovenes (Yugoslavia), Spain, China, Italy, the Irish Republic, Canada and Turkey had already acceded to the Protocol. Czechoslovakia and Japan, though not yet parties to the Protocol, also expressed their agreement with the British interpretation. Altogether, 11 of the 18 states which had ratified the Geneva Protocol and were members of the Preparatory Commission explicitly stated their adherence to the broad interpretation.

Here, again, was an opportunity for any government advocating the restrictive interpretation to come forth. Yet no dissent was voiced, on this occasion or subsequently. The only hesitation was that of the US representative, and it took the form not of an interpretation of—nor even a comment on—the Geneva Protocol, but of a conjecture, subsequently retracted,[34] relating to the Draft Disarmament Convention being considered by the Preparatory Commission. He said that there would be considerable hesitation on the part of many governments to bind themselves to refrain from the use in war, against an enemy, of agents which they had adopted for peacetime use against their own population. [54]

The US representative proposed that no decision should be made regarding the scope of the *draft convention* and that, instead, this should be taken up after careful study at the Disarmament Conference itself. That conference, when it met, did not try to interpret the *Protocol,* but it did include in Article 48 of its draft convention—with the acceptance, also, of the US delegate—the provision that the prohibition of use of chemical weapons to be affirmed in that Convention was to apply:

> ... to the use by any method whatsoever, for the purpose of injuring an adversary, of any natural or synthetic substance harmful to the human or animal organism, whether solid, liquid or gaseous, such as toxic, asphyxiating, lachrymatory, irritant or vesicant substances. [55]

For reasons unrelated to the definition of chemical weapons, the draft convention never entered into force.

Germany was the only other major power (in addition to the United

[34] In subsequent disarmament negotiations under League of Nations auspices, the US representatives repeatedly expressed opposition to the use of tear gas in war, and their government's willingness to forego such use, provided only that this did not affect the right to police use of tear gas. (See Volume IV, chapter 3.)

States) which did not express an opinion regarding the scope of the Geneva Protocol on the occasion of the British memorandum. However, its adherence to the extensive interpretation does not seem open to dispute. Recent military manuals of the Federal Republic of Germany present the Geneva Protocol as prohibiting "all chemical warfare" [56] or "the use of all chemical weapons" [57].[35] The German Democratic Republic undoubtedly adheres to the extensive interpretation, as do all other Warsaw Pact countries.

Summing up, it is clear that until recently the question of the inclusion of irritant-agent weapons under the prohibition of the Geneva Protocol has not presented any problem. The ambiguity of the text which was taken over by the authors of the Geneva Protocol had been pointed out by the US delegation already at the Washington Conference, and had, so far as one can judge, been resolved in favour of the extensive interpretation. The problem was again explicitly raised in the League of Nations in 1930—this time specifically in relation to the Geneva Protocol—on which occasion a clear *consensus* emerged, also in favour of the extensive interpretation. There is therefore no doubt that at the time this constituted the only authentic interpretation of that document.

Baxter and Buergenthal go further than this. They point out that those states which were represented on the Preparatory Commission in 1930, and which did not on that occasion or within a reasonable period thereafter record their opposition to the British memorandum, must be considered to have assented to it. They also find that the same must apply to all other states which ratified the Protocol at or about that time, because they all participated in the subsequent Disarmament Conference and thus were notified as to what had happened in the Preparatory Commission [58]. Again, since all members of the League of Nations had been alerted to the fact that the extensive interpretation of the Protocol was advocated by the major powers of the time, and no states had challenged this, it is signifi-

[35] Protocol No. III on the Control of Armaments, signed at Paris on 23 October 1954 as one of the instruments whereby the Western European Union was created through the revision of the 1948 Treaty of Brussels, imposes limitations on the rearmament of the Federal Republic of Germany, notably in the field of chemical weapons. In its definition of chemical weapons (given in Annex II to Protocol No. III) it includes substances having irritant properties, and also plant-growth regulating substances. But this definition cannot be adduced as evidence that the signatories of Protocol No. III, the member states of the Western European Union, would similarly interpret the Geneva Protocol. Protocol No. III does not refer to the Geneva Protocol, and does not even belong to the law of war. Moreover, the definition in Annex II to Protocol No. III encompasses antilubricant and catalysant substances (which are not covered by the Geneva Protocol) in addition to substances normally regarded as CW agents. Neither legally nor logically does Protocol No. III provide pertinent evidence on the scope of the Geneva Protocol.

cant that among the numerous states which have acceded to the Protocol after 1930, none has made a reservation excluding tear gas from the scope of the Protocol.

The interpretation given here on the subject of irritant agents accords with that which has prevailed among publicists. Among these Overweg [59], Waltzog [60], Stone [61], Spaight [62], and Baxter and Buergenthal [63] may be mentioned. Spaight wrote that it should be held to be an "unquestionable truth" that the Protocol condemns "not only lethal but also non-toxic or anaesthetic gases"; in other words, that it prohibits "the use of gas in any kind or form, whether it be chlorine, phosgene, mustard or any less harmful variety" [64]. Nevertheless, some of these authors base that thesis less on the interpretation of the Protocol than on the practical considerations which, in their opinion, justify the extensive character of the prohibition of CW.

Recent developments and the 1969 UN resolution

The question of the prohibition of the use of tear gases in war under the Geneva Protocol had been definitely settled in the 1930s in favour of the extensive interpretation. Following the revival of interest in the late 1950s and early 1960s in the United States in so-called incapacitating weapons[36] and, subsequently, the use of irritant-agent weapons on a large scale in Viet-Nam, this interpretation has been called into question again and has become the subject of considerable controversy. The United States has attempted to gain support for a restrictive interpretation of the Geneva Protocol, as regards both irritant-agent weapons and herbicides. In fact, very few parties to the Protocol—although these include some relatively important states—have endorsed this position. Some other states have taken the view that the Protocol admits of several interpretations, none of which can claim authenticity. The legal implications of these deviations from the majority view are considered below.

The dispute came into the open in November 1966, when the representative of Hungary submitted a draft resolution to the First Committee of the UN General Assembly which later, after a number of amendments had been made, became the resolution of December 1966.[37] The Hungarian proposal was prompted by the use of chemical weapons in Viet-Nam, and its intent was to affirm the illegality of such practice. Its operative paragraphs read as follows:

[36] See Volume I, p. 77 and Volume II, pp. 273–74.
[37] See Resolution 2162 B (XXI); appendix 3.

The General Assembly ...

1. *Demands* strict and absolute compliance by all States with the principles and norms established by the Geneva Protocol of 17 June 1925, which prohibits the use of chemical and bacteriological weapons;

2. *Condemns* any actions aimed at the use of chemical and bacteriological weapons;

3. *Declares* that the use of chemical and bacteriological weapons for the purpose of destroying human beings and the means of their existence constitutes an international crime. [65]

In submitting the draft, the Hungarian delegate made it clear that he was aiming at the US use of chemical weapons in Viet-Nam [66].

The expression "chemical weapons" used without any qualifying term was, so several western delegates maintained, an interpretation of the Protocol. The United States claimed—and two or three other states seemed to agree—that it was an incorrect interpretation. In the course of the amendment procedure, this expression was replaced by a reference to the title of the 1925 "Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare", and the reference to the "means of existence" of human beings disappeared without having really been discussed. So the resolution which was finally put to the vote and adopted did nothing to resolve the supposed ambiguities of the Protocol. The votes cast on this occasion do not have any significance from the point of view of determining the comprehensiveness of the ban.[38] Nevertheless the discussions in the First Committee which led to these amendments do throw some light on the positions taken by various states and on the reasons why they have taken these positions.

It was not until 1969 that a resolution explicitly taking a stand on the question of the comprehensiveness of the prohibition was submitted to a vote in the UN General Assembly. This was the 21-power resolution[39] which advocated the extensive interpretation. It declared, *inter alia,* that the use of "*any chemical agents of warfare*" was "contrary to the generally recognized rules of international law, as embodied in the [Geneva Protocol]" (emphasis added). The sponsors of the resolution made it clear that it was meant to affirm the absolutely comprehensive character of the prohibition.[40]

[38] The great importance of this resolution from another point of view, namely as regards the consolidation of the customary rule, is discussed below, pp. 120–26.

[39] Resolution 2603 A (XXIV), adopted on 16 December 1969. See appendix 3.

[40] The resolution went on to define the prohibited chemical agents of warfare as chemical substances, whether gaseous, liquid or solid, which might be employed because of their direct toxic effects on man, animals or plants. In that text, therefore, the word "toxic" has its normal broad meaning, as it does in the World Health Organization report [67] and also in the present study (see p. 13, note 1).

The United States, which was directly aimed at in the 1966 Hungarian proposal, could, theoretically, have taken an attitude of disinterest in this controversy over the "qualifications" supposedly appearing in the Protocol's definition of the prohibited weapons and their relevance to methods of warfare being used in Viet-Nam. The USA could have done so since it is not a party to that treaty. Instead, for obvious political reasons, the United States chose to defend itself by proposing an interpretation of the Protocol.[41] What the US delegate called "the accepted interpretation" is, naturally, the restrictive one with which the US conduct would appear to conform. This "accepted interpretation" is also, therefore, the opposite of the meaning which the US delegation had given to the definition of chemical weapons in 1922 when it proposed the text of Article 5 of the Treaty of Washington and the opposite of that which the parties to the Protocol had agreed in 1930 was the authentic one.

The US delegate maintained before the First Committee of the UN General Assembly that the Protocol "does not apply to all gases, and it certainly does not prohibit the use of simple tear gas. . . . It is unreasonable to contend that any rule or international law prohibits the use in military combat against an enemy of non-toxic chemical agents that governments around the world commonly use to control riots by their own peoples". [69]

This argument about *tear gas being commonly used by police forces* to disperse riots is the argument most frequently used to justify the restrictive interpretation. It has been brought up time and again by the US Government and, more recently, by other governments as well. It was used by US Secretary of State Dean Rusk in March 1965 when emotion was aroused in world opinion by reports concerning the use of tear gases by the US forces in South Viet-Nam. In a subsequent note to the UN Security Council, the US representative stated:

> Poisonous gases, the use of which would rightfully concern the conscience of humanity, have not been used in Vietnam, nor is there any intention of employing them. The materials which were employed in Vietnam are commonly used by police forces in riot control in many parts of the world and are commonly accepted as appropriate for such purposes. They are non-toxic and of course are not prohibited by the Geneva Convention [*sic*] of 1925, nor by any other understandings on the subject. [70]

[41] On the occasion of the Korean BW allegations, when the Soviet Union had submitted a somewhat similar draft resolution to the Security Council [68], the United States had denied the allegations and had not attempted to interpret the Protocol. In fact it had been very careful not to make any statements which could be taken to suggest that it was or was not bound by the Protocol.

As in the two cases cited here, references to this police-use argument are generally so vague that it is not clear what role they are meant to fulfil in the statements in which they occur: whether these statements are simply affirmations of what the law *is* (in which case the reference to police use contributes nothing to the statement); or whether the reference to police use is meant to contribute an argument of some legal pertinence and weight, so that the statement in which it is included becomes an affirmation of what the law, in legal logic, *must necessarily be*; or again whether the reference to police use is meant to convey an evaluation of an extra-legal kind so that the statement becomes an affirmation of what the law *ought to be* in order to conform with certain standards of reasonableness.

However this may be, the argument—if it is meant to be an argument—is completely spurious and is pertinent neither in fact nor in law. *In fact,* the conditions of police use and those of military use of irritant-agent weapons are in typical cases completely different.[42] *In law,* the police/rioter relationship is a relationship of domestic public law, while the military/enemy personnel relationship is a relationship of international law. The international law prohibition of the use of irritant-agent weapons for military purposes does not render illegal the police use of those same weapons. Conversely, the internal practice and domestic law, if any, which authorize the police use of riot-control agents cannot be used to contradict an international rule which prohibits such practice in the international relationship of war. This is not to deny that situations may occur in which the distinction between a relationship of domestic law and of international law is not so simple. Such cases do occur, and when they do, firm judgements about the legality of using irritant-agent weapons may be impossible to make. But the existence of ambiguous cases cannot render legal the use of CB weapons in those cases which are *not* ambiguous. Yet the argument of the US Government is apparently meant to show the legitimate character, with respect to the Geneva Protocol, of the use of irritant-agent weapons, *also in situations covered by the Protocol itself,* that is to say, in a war of an international character.

It should be recalled here that since the United States is not a party to the Geneva Protocol, the statements of the US Government have, of course, no legal effect on the interpretation of that treaty. Nor does the practice followed by the United States relative to the military use of irritant-agent weapons have any implications for its prohibitory scope.[43]

[42] See also Volume V, appendix 1, and Volume I, pp. 212–14 and, as regards practice in Viet-Nam, Volume I, pp. 185–203.

[43] The United States may become a party to the Protocol in the near future. Ratification is being contemplated without a formal reservation regarding irritant-agent weapons but with an informal "understanding" that these weapons (and herbicides as well) are

Australia is the only party to the Protocol which is known to have used irritant-agent weapons in war (in Viet-Nam) since Italy used them in Ethiopia in the 1930s.[44] It is, therefore, certainly not possible to claim that in respect of the textual ambiguity in the Protocol on the question of its application to irritant-agent weapons, the treaty has been forged in a restrictive sense by the practice of states parties to it (as it has in the case of incendiaries and smokes).

Very few parties to the Protocol have explicitly defended the restrictive interpretation. In 1966 the Australian delegate to the United Nations merely criticized the alleged inaccuracy of the expression "chemical weapons" and "bacteriological weapons" which appeared in the Hungarian proposal.[45] In his opinion:

> It is not enough to say that we all know what is meant by chemical weapons. I strongly fear that if we say that, it will mean in practice that every group of military forces will take it as meaning that what they want to use is permitted, and that what the enemy wants to use is prohibited. [71][46]

By implication, this is already a stand in favour of a more or less restrictive interpretation, for with the extensive interpretation this problem could not arise. It arises precisely when ill-defined categories of weapons are exempted from the prohibition, and particularly when the very terms used by different countries to describe the exempted weapons are not the same. To Australia it is "riot-control agents" which are not prohibited; to the United Kingdom it is "substances which are not significantly harmful"; to Belgium it is "tear gases and other gases which are in police arsenals"; and to the United States it is a variety of different things.[47]

exempted from the prohibition. On the legal consequences (or lack of same) of such an informal understanding, see pp. 88–89 below. On the wider political issues, see Volume V, especially pp. 68–72.

[44] Egypt is also alleged to have used irritant-agent weapons in the Yemen. Even if these allegations are true, the legal importance of this case would be mitigated by two factors: Egypt's denial of the allegations (see Volume V, appendix 4); and Egypt's adherence to the extensive interpretation of the Protocol (as evidenced by its positive vote on UN Resolution 2603 A (XXIV)—see appendix 3).

[45] Actually the term "bacteriological weapons" is a true synonym of the expression "bacteriological methods of warfare" used in the Protocol. Moreover, the delegates who criticized the expressions "chemical weapons" and "bacteriological weapons" which appeared in the operative part of the Hungarian proposal advocated an amendment in which these same terms are found. (That amendment became the last paragraph of the preamble of the resolution as finally adopted; see appendix 3.)

[46] This is a considerable exaggeration. The freedom to interpret the expression opportunistically cannot exceed the limits of the difference between the extensive and restrictive interpretations of the Protocol. It is also limited by the principle of estoppel (see below, p. 64).

[47] This terminological confusion is rampant. While objecting to the expression "chemical warfare" in the Hungarian proposal, which the US delegate understood to *include* tear gas, he referred approvingly to a statement a few days earlier by US Secretary of

In the debates in the UN General Assembly in 1968, the Australian delegate was more explicit and affirmed that the Protocol "clearly" does not apply to defoliants, herbicides and riot-control agents [72]. One year later, the Australian delegate in the First Committee made a formal statement:

It is the view of the Australian Government that the use of non-lethal substances such as riot control agents, herbicides and defoliants does not contravene the Geneva Protocol nor customary international law. [73]

In the 1968 debates on CBW in the UN General Assembly, the Belgian representative stated his agreement with the US view that the use of tear gases is not prohibited by the Protocol [74]. This remark was made in passing, and no reason was given for this view.

In the discussions in the First Committee in 1966, the United Kingdom had referred to the opposing views on tear gas without, however, taking sides. In the opinion of the British delegate, the use of the expression "chemical weapons", which does not appear in the Protocol, already constituted an interpretation of that document [75].[48]

The new position of the United Kingdom was first made explicit in February 1970. In a parliamentary reply, Michael Stewart, the Secretary of State for Foreign and Commonwealth Affairs, set out the government's interpretation of the Protocol in relation to CS gas and other irritant-agent weapons:

I should like to take this opportunity to explain the Government's view on the scope of the 1925 Geneva Protocol, as regards the use of tear gases in war. In 1930, the Under-Secretary of State for Foreign Affairs, Mr Dalton, in reply to a Parliamentary question on the scope of the Protocol said:

"Smoke screens are not considered as poisonous and do not, therefore, come within the terms of the Geneva Gas Protocol. Tear gases and shells producing poisonous fumes are, however, prohibited under the Protocol." [77]

That is still the Government's position.

However, modern technology has developed CS smoke, which unlike the tear gases available in 1930, is considered to be not significantly harmful to man in other than wholly exceptional circumstances; and we regard CS and other such gases accordingly as being outside the scope of the Geneva Protocol. CS is in fact less toxic than the screening smokes, which the 1930 statement specifically excluded. [78]

The British Government is attempting to show that when it now excludes CS gas from the prohibition of the Protocol it is being consistent with the interpretation it gave to that treaty in 1930—indeed, that this exclusion

State Dean Rusk according to which the United States was not engaged in "gas warfare", a term, therefore, which must *exclude* tear gas.

[48] The delegate of Kenya made a similar reference to the opposing views on tear gas without taking sides [76], but at that time Kenya had not yet acceded to the Protocol.

is a logical consequence of its previous position when applied to the weapons which "modern technology" has produced. The British memorandum of 1930 flatly stated that the "Government have taken the view that the use in war of 'other' gases, including lachrymatory gases was prohibited . . .". Now, instead of this formal declaration made to an international forum, reference is made to a somewhat ambiguously worded reply to a parliamentary question on smoke screens and, for the occasion, CS gas is relabelled as "CS smoke".

Smokes, it was noted, are excluded from the prohibition, not because they are not toxic (or asphyxiating—they may be both), but because their military *intent* is not related to their toxicity. That is, no doubt, the meaning of Mr Dalton's parliamentary reply in 1930 which was just quoted: "Smoke screens are not *considered* as poisonous . . ." (emphasis added). But CS gas is not a smoke. Whatever the British Government calls CS, it remains an irritant agent; its intended effect is toxic, not optical.

The contention that in 1930 irritant agents were considered prohibited *because* they were in some measure poisonous is wrong, and does not follow from the evidence on which the British Government itself has sought to rest its case.[49] Moreover, a recent investigation of the departmental minutes from 1930, now publicly available under the Thirty Year Rule, has shown conclusively that tear gases were included by the British interpretation of the Protocol, but *not* because they were thought to be toxic [79]. A Foreign Office minute from 1930 showed clear awareness of the possibility that tear gases may exist which did not injure health ("not significantly harmful") and which, in the British view, were *nonetheless prohibited.* It stated in part:

> The position in regard to the Gas Protocol is complicated by the fact that the Americans and others do not regard the prohibition as extending to tear gas, which apparently is harmless to health and, in point of fact, have recently made use of tear gas in dealing with civil disturbances. We on the other hand . . . *do* regard tear gas as prohibited by the protocol . . . [80]

When "modern technology" gives rise to new weapons, the correct procedure in determining their status under the law of war is that which the British Government ostensibly followed: to determine how the weapon would have been classified by the drafters of the treaty or by those who,

[49] In the second part of the reply—". . . Tear gases and shells producing poisonous fumes are, however, prohibited . . ."—the word "poisonous" means "toxic" in the widest sense of the word: inducing a toxicological effect in the target organism. In any case, it may be noted that the modifier "producing poisonous fumes" must relate to the shells mentioned, *not* the tear gases: tear gases do not "produce poisonous fumes". Yet, it seems to be on this phrase that the British Government bases its belief that tear gases were prohibited *because* they were thought to be poisonous.

in 1930, settled the question of interpretation. There is no indication that the British Government intended to make a unilateral and restrictive *re-interpretation* at variance with its previous position.[50] However, in this process of applying an early interpretation, the British Government of 1970 mistakenly assumed that its 1930 predecessor had only favoured a ban on tear gases because those in existence at the time were, or were believed to be, significantly harmful to health, also in normal circumstances. The present British position which excludes CS from the scope of the Protocol (but not such other irritant agents or "police-type" agents as CN or Adamsite),[51] resting as it does on historical facts which are inaccurate, is therefore simply mistaken.[52]

A few countries which at first adopted views consonant with the restrictive interpretation or views which might be construed as indicating some doubt about the comprehensive character of the Protocol, have since made clear their acceptance of the extensive interpretation. In the UN discussion of the Hungarian draft resolution in 1966, the Canadian delegate had found it unacceptable that the proposal should present as a fact the idea that the Geneva Protocol prohibited the use of chemical weapons without mentioning the qualifications given in the text of that document [85]. In 1969, Canada abstained in the vote on resolution 2603A (XXIV), which affirmed the comprehensive character of the Protocol, and in March 1970 Canada issued a statement that it did not possess biological or chemical weapons and did not intend to develop, acquire or use such weapons in the future unless they were used against Canada or its allies. Tear gas and other crowd- and riot-control agents were excluded from this declaration on the grounds that "their use or the prohibition of their use in war presents practical

[50] In any case, the development of CS is not a new development which can justify a *re-interpretation* of the Protocol, for the latter contains no provisions for altering its scope in response to technical developments. According to the 1969 Vienna Convention on the Law of Treaties, a re-interpretation based on new developments is justified only if the latter concern the subsequent practice of parties to the treaty. But Australia is the only party to the Protocol ever known to have used CS gas in war, and it can certainly not be argued that this constitutes sufficient practice to exclude the use of this gas from the scope of the Protocol.

[51] From the 1920s until the 1950s, CN was the standard British tear gas. Since tear gas was regarded as prohibited under the Protocol, CN, according to the logic of the British Government in 1970, must therefore have been considered "significantly harmful" in other than exceptional circumstances [81]. A recently declassified paper from the British Chemical Defence Establishment, written in 1958, stated: "DM [Adamsite] was seriously considered either alone or in a mixture [as a riot-control agent to supercede CN]; it was eventually ruled by the Legal Branch of the War Office that in view of its poisonous nature the use of DM must be proscribed in accordance with the provisions of the Geneva Gas Protocol" [82].

[52] See to the same effect the interventions of the delegate of Sweden at the Conference of the Committee on Disarmament [83] and in the First Committee of the UN General Assembly [84].

problems in relation to the use of the same agents by police and armed forces for law enforcement purposes which require detailed study and resolution". [86]

In 1971, however, the Canadian Government decided to waive its reservation with regard to the use of irritant-agent weapons. In a statement to the UN General Assembly, the Canadian Representative affirmed that his country did not "intend at any time in the future to use chemical weapons in war, or to develop, produce, acquire or stockpile such weapons for use in warfare . . ." unless they were used against Canada or its allies, and concluded that this statement applied "to all chemical and biological agents whether intended for use against persons, animals, or plants". [87]

The Netherlands had also opposed the Hungarian draft resolution in 1966. The Dutch delegate felt that there was good cause to examine seriously the possibility of a revision of the Protocol by an appropriate agency, and that, considering the scientific and technical development since the war, such a revision was more than justified. Presumably the scientific and technical development he had in mind concerned irritant-agent weapons and herbicides (despite the fact that, in the form of tear gas, irritant-agent weapons had already been in common usage during World War I). In 1970 the Netherlands Advisory Committee on Questions of Disarmament and International Security and Peace, which was in the process of preparing a comprehensive report on biological and chemical weapons for the Minister of Foreign Affairs, submitted an interim report on the question of tear gases in which its majority recommended that these should *not* be exempted from a ban on chemical weapons [88]. The Committee did not take a stand on the legal issues involved, but based its recommendation on considerations of desirability. Together with other NATO powers, the Netherlands abstained in the 1969 vote. By October 1970, however, the Netherlands had reverted to a position favouring the extensive interpretation. The Dutch Government declared its readiness—in the framework of international negotiations—to follow the majority view and its intention to try to promote a consensus along those lines [89].

Norway, which had also abstained in the 1969 United Nations vote, stated in November 1971 that, in its view, "a comprehensive ban on chemical weapons should establish beyond question that the use in warfare of tear gases and herbicides is strictly prohibited" [90].

In any case, the Dutch delegate's suggestion of a revision of the Protocol in the light of scientific and technical developments (formal proposals to this effect were submitted by Malta in 1967 [91] and by New Zealand in 1970) is not legally justified. Any state is free to propose and to seek support for a *new* treaty (it is less certain that it would also be free to withdraw

from the Geneva Protocol), but there is no provision in the Protocol suggesting that technical developments—or any other developments—may justify a revision or render it necessary. The Protocol was evidently meant to have foreseen and to have prejudged any future developments of the weapons it prohibited.

The most important evidence regarding the interpretations of the Geneva Protocol by the parties to it is provided by the vote on United Nations resolution 2603 A (XXIV) which affirmed the absolutely comprehensive character of the prohibition enunciated in the Protocol.

It is clear that, in so far as the conventional rule is concerned, a resolution by the UN General Assembly cannot have a norm-creating function. In the case of a *customary* rule, a resolution adopted by a near-consensus could consolidate an existing norm and, inasmuch as it were an expression of the beliefs of states, it could even be an element in its creation; but with a convention, a resolution of the General Assembly must retain a much more limited role, since it cannot bypass the constitutional procedures in each state which govern the ratification of, or accession to, treaties. The resolution therefore is nothing but an opportunity for those member states which happen to be parties to the treaty to make explicit their interpretation on those particular points where the treaty itself may be ambiguous.

It is not the resolution and the fact of its adoption, but the affirmative votes cast by individual states, which, nonetheless, constitute international commitments of a juridical character. This follows from the principle of *estoppel* which serves to protect treaties against opportunistic interpretations. It is a corollary of the general principle demanding that treaties be interpreted and applied in good faith. By virtue of it, a belligerent, party to the Geneva Protocol, which has defended in the not too distant past one of the two interpretations of the definition of the prohibited means of warfare, may be confronted by that interpretation, provided the party invoking it against the first-mentioned party is not itself prevented from so doing by application of the same principle of estoppel.

From a formal point of view, an affirmative vote was not directly an act of treaty interpretation. According to the wording of the resolution itself, such a vote was a statement about the scope of the customary prohibition: "the generally recognized rules of international law". But the resolution also affirms that the Geneva Protocol "embodies", in other words gives expression to, these generally recognized rules. The resolution affirms the identity of scope of the customary and conventional prohibitions. Implicitly, therefore, a state voting for the resolution expresses its adherence to the broad interpretation of the Protocol.

In December 1969, at the time of the vote, there were 67 parties to the

Protocol.[53] Half of them used this occasion to express their adherence to the broad interpretation.[54] Among the parties to the Protocol, only Australia explicitly defended the view that the use of irritant-agent weapons in war was not prohibited under the Protocol. As noted, Belgium had done so the year before, and the United Kingdom adopted a similar position shortly afterwards, whereas Canada, the Netherlands and Norway have since explicitly accepted the extensive interpretation of the Protocol. The views, if any, of the remaining 27 parties to the Protocol[55] do not seem to have been formally expressed in recent years.[56] Of the 67 parties to the Protocol at the time of the 1969 vote there are thus, at the present time, 37 which are known to defend the extensive interpretation, three who oppose it, and 27 whose stand is not formally known.

In respect of the comprehensiveness of the ban contained in the Geneva Protocol, the efforts in the United Nations did not lead to a consensus. But this is not necessary for deciding the question we are concerned with here: the question of the correctness of the two interpretations of the Protocol. The question is not whether there is a majority, large or small, in favour of one interpretation. The meaning of a treaty is not to be determined by a vote taken among its parties at some point in time, in disregard of the meaning given to that treaty in the past. The question which arises is of a much more limited kind. In the pre-war period it was generally admitted that the Geneva Protocol prohibited the use of tear gases in war. Can it be maintained that a new and more restrictive interpretation has imposed itself in the meantime as a result of a relatively uninhibited use of these weapons in war among the parties to the Protocol

[53] Counting China and Germany twice and disregarding the Baltic states (see appendix 2, pp. 147–50).

[54] These 34 states were the 33 parties to the Protocol who supported the resolution (disregarding Byelorussia and the Ukraine) plus France, which stated its agreement with the substantive content of the resolution, but abstained in the vote for procedural reasons. (For a list of the states in question, see appendix 3.)

[55] These include 19 states which abstained in the vote (the 25 listed in appendix 3 minus Belgium, Canada, France, the Netherlands, Norway and the United Kingdom), six parties to the Protocol which were not members of, or seated in, the United Nations (the People's Republic of China, the two Germanies, the Holy See, Monaco and Switzerland), one United Nations member which did not take part in the vote (Gambia), plus Portugal which voted against the resolution.

[56] In the absence of other evidence, abstention in the General Assembly vote, or even a negative vote, cannot, of course, be interpreted as a stand taken in favour of the narrow interpretation of the Protocol. They may have been prompted by any of a number of other controversial aspects of the resolution. Indeed, most of the states which abstained invoked reasons of a legal nature, constitutional or procedural, questioning the competence of the General Assembly to interpret existing legal rules by means of resolutions. Among the 25 parties to the Protocol which abstained, such reasons were mentioned by Austria, Belgium, Canada, China (Taiwan), Denmark, France, Greece, Italy, the Netherlands, New Zealand and Turkey.

and of the open or tacit acquiescence of these same parties to such an erosion of its prohibitory scope?

This is the question which needed to be answered, and which received an answer with the General Assembly vote in 1969. Not only has the use of irritant-agent weapons in war in situations covered by the Protocol been wholly exceptional. On that occasion, it became clear that well over half the parties to that treaty consider such use illegal and are firmly opposed to any erosion of the prohibition contained in the Protocol: to *changing* its scope in a restrictive direction. The importance of the resolution stems from the fact that it terminated a period of increasing confusion about the scope of the prohibition and a process which, if it had gone unchecked, could later have been taken as evidence of a change in the scope of the treaty by the active efforts of some countries and the tacit acquiescence of others. As explained by its sponsors, the aim of the resolution had been to prevent such erosion by default [92].

In view of the confusion created by the position the United States has adopted as regards the use of irritant-agent weapons in war, there is no reason to doubt the sincerity of the convictions of those countries—the United Kingdom, Belgium and Australia—which believe that these weapons are legitimate means of warfare, even for states parties to the Geneva Protocol. But as the foregoing examination shows, such convictions are mistaken. In 1930 the United Kingdom and Australia had explicitly endorsed the extensive interpretation, as had all other states which voiced an opinion and were qualified to do so. It is impossible to defend the view that an erosion of the Protocol on this point has taken place in the meantime. The initial comprehensive character of the prohibition therefore remains in force.

In the course of 1970, 1971 and 1972, another 24 states became parties to the Protocol. Nineteen of them had already shown that they understood the terms of the treaty to be all-encompassing when they voted for the 21-power resolution in 1969.

No state has ever acceded to the Protocol with a formal reservation excluding irritant-agent weapons from its prohibitory scope insofar as the contractual obligations of that state are concerned. This being so, the treaty cannot have a different content for different parties to it, and the beliefs of a few states—Australia, Belgium and the United Kingdom—that certain weapons are not prohibited under the Protocol *does not render legal their use by those states*. This is discussed more extensively below, together with the reservations to the Protocol.

Targets to which the Geneva Protocol applies

The second major point of controversy about the scope of the Geneva Protocol concerns the question of its application to the use of herbicides in war or, more generally, of whether the Geneva Protocol applies only to the use of CB weapons directly against human beings or whether it also prohibits attacks on animals and plants. As in the case of irritant-agent weapons, two interpretations, one restrictive and one extensive, exist in opposition.

To decide the issue, one would ideally have proceeded in the same way as before: analysing the wording of the Geneva Protocol and, if necessary, resorting to the circumstances of its conclusion and the subsequent interpretative statements and wartime practices of the parties. This particular question cannot be easily settled in this way, however, because there is relatively little pertinent evidence to go by. This arises primarily from the fact that, contrary to the case of irritant-agent weapons, the possible use of herbicides in war did not attract much attention until very recently. The possibility that BW agents may be used against plants was perceived in 1925, but was not widely discussed. A serious military interest in the use of antiplant agents for crop destruction did develop during World War II, but plans to actually use the agents were never put into effect and the question did not receive much publicity. The use of defoliants by the British forces in the Malaysian jungles in the late 1940s and 1950s went largely unreported.[57] It was not until large-scale use of herbicides began in Viet-Nam in the late 1960s that chemical antiplant agents became known to the public as a possible weapon of war.

When a general awareness of this possibility did develop in the years after 1966, the debates on the legality of herbicide warfare became closely linked to the political issues involved in the Viet-Nam War. When analysing the positions taken or eschewed by particular states on this question, it is often difficult to unravel the part played by the political issues from that played by wider legal convictions.

Whatever evidence there is concerning the legality of herbicide warfare under the Protocol suggests that such means are indeed comprised under its prohibition. However, the evidence is not so compelling that a state could not in good faith defend the restrictive interpretation of the Protocol.

This being so, it is particularly important to consider those general rules of the law of war which restrict the rights of belligerents to attack and destroy animals and vegetation and which do so without regard to the particular means being used. These rules, which of course are in no way

[57] See Volume I, p. 163.

related to the Geneva Protocol and which apply to all states irrespective of their adherence to the treaty, specify which *targets* may legitimately be made the object of attack and under what circumstances they may be attacked, whatever *weapon* is used. These rules relate to what is known as economic warfare, destruction and the definition of legitimate bombing targets.

Consequently, the phenomenon of chemical or biological attack on animals and plants is made up of two elements which, taken separately, are governed by divergent rules. One set of rules, which is here discussed first, refers to the "target" aspect of the attack and is rather widely tolerant in character; the other refers to the "weapon" aspect. It is of a prohibitive nature and is discussed later.

Target aspect

It has always been admitted that it is legitimate for a belligerent in enemy territory to destroy vegetation, whatever it is, which hampers his operations or the presence of which jeopardizes his security. Examined under the *target* aspect, the *defoliation* procedure as it is practised by the US forces in South Viet-Nam does not give rise to criticism from the point of view of the law of war. This is not only true in those cases where the vegetation attacked is jungle, but also in the cases where the target consists of plantations which hamper military operations. Such destruction, of course, must not be of exaggerated proportions, either quantitatively or qualitatively, but by assumption it is resorted to for purely military purposes and the destruction—at least in its short-term consequences—is not inadequate to the objective. In the particular case of the Viet-Nam War, where defoliation has taken place on a very large scale and with agents the long-term ecological, human and animal health aspects of which are mostly unknown and potentially very great,[58] the question arises whether—from the standpoint of the law of war—the military purposes are proportionate to the real and potential destruction caused.

Products derived from *industrial crops* such as rubber, timber and cotton, constitute what Article 53 of the Hague Regulations calls *war munitions,* the seizure or destruction of which is permitted, whether they are private or public property, provided it is motivated by necessities of war, reasonably understood. If, subject to that reservation, the destruction of these goods is legitimate in the industrial stage, it would seem logical to consider their destruction in the live plant stage as being also legitimate.

Similar reasoning applies to *economic crops* when considered not as food for the population of the enemy country but as goods intended for monetary

[58] See Volume II.

exchange (sugar, coffee, cacao, etc.). The seizure of crops or finished products in the form of cargoes, and their destruction if deemed necessary, are frequently used as means of economic warfare and are considered legitimate. Hence it would appear difficult to consider the destruction of these same goods in the growing stage as being prohibited.

As regards *food crops,* the general rule is that their destruction for the purpose of starving the enemy population is not allowed.[59] Nevertheless, there are a few decidedly exceptional cases in which the destruction of food crops or the denial of food to the enemy is accepted by the law of war.

One such case is the practice of economic warfare, in particular the blockade, as it has been applied during the two World Wars. What is involved here is a special régime, created historically and materially by the conditions of maritime warfare—conditions which the law of war does not permit to be extended to land warfare. The same applies to another special régime, the siege, which is similar to the blockade in this particular aspect. The besieging forces have the right to prevent any entry of food into the stronghold under siege and thereby may seek to starve out the entire population of the stronghold in order to cause its prompt surrender. Neither militarily nor legally is the systematic destruction of crops in enemy territory comparable to blockade or siege.

Another exception might be the case in which the food crops are demonstrably intended for use by enemy forces. If one disregards any special prohibitions regarding the weapons used—and that reservation needs to be emphasized—then it is probably correct, as stated in the 1956 US Army field manual, that it is permissible "to destroy, through chemical or bacteriological agents harmless to man, crops intended solely for consumption by the armed forces (if that fact can be determined)" [94].[60] A similar interpretation must then apply to livestock.

The tolerance of the law of war goes still further. Under exceptional circumstances it admits the "scorched earth" policy.[61] When an army

[59] In the words of the Institut de Droit International, "[t]he means indispensable for the survival of the civilian population" cannot, "under whatsoever circumstances", be considered as military objectives [93].

[60] The rule is certainly wrong (today), *at least* as regards biological (bacteriological) agents. For these, as is shown below, the Geneva Protocol cannot admit of any exceptions. Moreover, it is certain that *at least* that part of the Protocol is now declaratory of customary law and therefore binding on all states, irrespective of their adherence to the Protocol.

[61] See decision of the American Military Tribunal of Nuremberg in the case of List *et al.* ("The Hostage Case"), 19 February 1948, which, *inter alia,* concerned the "scorched earth" policy carried out by order of German General Rendulic in the Norwegian province of Finmark before the advance of Soviet forces: "The destruction of public and private property by retreating military forces which would give aid and comfort to the enemy may constitute a situation coming within the exceptions contained in Article 23 (g) [of the Hague Regulations of 1907] ... It is our considered

operating in enemy territory and forced to retreat before an enemy advance destroys crops, that action is not considered illegal if it is justified by military necessity.

But it is certainly not possible to derive from these diverse exceptions a general permission for a policy of starvation.[62] The diversion of food from occupied territory to German needs, when this resulted in starvation in the occupied territory, was one of the war crimes and crimes against humanity of which Goering was convicted at Nuremberg [97]. Japanese military officials were prosecuted at the Tokyo tribunal for "willful and unreasonable destruction of tillable soil and farmlands in China ... [which] caused starvation" [98–99]. It follows from Article 53 of the 1949 Geneva Convention Relative to the Protection of Civilian Persons in Time of War that the destruction by an occupying power of enemy farm land is prohibited, except in the case of absolute military necessity [100].[63]

The existence of a general norm prohibiting a policy of starvation does not necessarily preclude recourse to crop destruction. It is, however, difficult to see what military function could be served by a policy of limited crop destruction, and once destruction has become sufficiently vast to have a substantial impact on the enemy it might be hard to distinguish it from a policy of starvation.

The justification initially given by the United States for its use of herbicides in Viet-Nam was that they were being used "to control weeds and other unwanted vegetation", and would only "involve the same chemicals and have the same effects" as herbicides used domestically. Inasmuch as these agents were first used around base perimeters and along lines of communication, this usage does not—in the absence of a prohibition specifically directed at herbicides as such, and this is the hypothesis with which we are concerned here—give rise to objections from the standpoint of the law of war. Soon, however, the political justification was eroded by military practice, as these agents were increasingly used to

opinion that the conditions, as they appeared to the defendant at the time, were sufficient upon which he could honestly conclude that urgent military necessity warranted the decision made". [95]

[62] Colonel B. J. Brungs draws from the two special régimes of siege and blockade the conclusion that the systematic destruction of crops in enemy countries, intended principally as food for the civilian population, should be held to be permissible: "The employment of anticrop and anti-animal biological agents for siege purposes would be lawful to the same extent as the use of land or sea blockade". [96] This argument is based on a false analogy. The systematic destruction of crops in the enemy territory cannot be made legitimate by applying to it the term "siege" or by attributing to it the siege motive, which is entirely out of place.

[63] According to the US Army field manual [101], these rules "should, as a matter of policy, be observed as far as possible", not just in occupied territory but "in areas through which troops are passing and even on the battlefield". See also Bunn's discussion of the subject [102].

destroy crops in areas held by the National Liberation Front forces. These crops could certainly not be shown to be intended solely for consumption by the enemy armed forces. This suggests that already from the target aspect, the use of herbicides has been in contravention of the rules enunciated in the United States Army field manual itself.[64]

Weapon aspect

The discussion so far has been concerned with the question of the legality of CBW attacks against non-human targets from the point of view of the target alone, i.e., from the point of view of the general international law of war. But this is only half of the problem. In order to examine the other half, we must return to the Geneva Protocol itself, to the work in the relevant preparatory committees and to the subsequent practice and interpretative acts of governments.

First, it may be noted that whatever can be said of *chemical* herbicidal products, the use of *biological* agents against plants and animals is undoubtedly prohibited by the Protocol. This results, first, from the extreme generality of the expression "bacteriological *methods of warfare*", which, as regards the target of attack, does not leave room for any restrictive interpretation, and, second, from the several official and semi-official expressions by parties and non-parties alike, that the prohibition of biological means enunciated in the Geneva Protocol does not admit of any exceptions. The Polish delegate who suggested the explicit reference to bacteriological weapons in the Geneva Protocol, pointed out that "Bacteriological warfare can also be waged against the vegetable world, and not only may corn, fruit and vegetables suffer, but also vineyards, orchards and fields." [103] The subsequent acceptance of the broad formulation proposed by the Polish delegate can only mean that bacteriological anticrop warfare was condemned by the Protocol.

Later interpretations are in the same direction. A directive by the Defence Ministry of the Federal Republic of Germany, for example, which forbids all bacteriological warfare, defines it as "the use for war purposes of pathogenic bacteria in view of their rapid multiplication and propagation

[64] Actually the construction in the US Army field manual (paragraph 37) is somewhat confused. After quoting Article 23, paragraph (a) of the Hague Regulations of 1907 which prohibits the use of poison and poisoned weapons in war, it affirms that this rule does not prohibit destruction of enemy crops by means of CB agents if these crops are known to be "intended solely for consumption by the [enemy] armed forces". Either chemical herbicides are "poisons", and if they are, their use in war is *totally* prohibited, whatever the target. Or else they are not poisons in the meaning of the Hague Regulations, and in that case, whatever prohibition there may be against using them against crops intended, wholly or partly, for civilian consumption, it cannot derive from *that* disposition of the Regulations.

among human beings, animals and plants" [104], and the 1968 US *Joint Chiefs of Staff Dictionary* defines biological warfare even more comprehensively so as to encompass certain chemical substances as well: biological warfare is the "employment of living organisms, toxic biological products, and *plant growth regulators* to produce death or casualties in man, *animals or plants* or defense against such action". [105] (Emphasis added.) Numerous other documents could be quoted to show that the concept "biological methods of warfare" and the expression "biological weapons", which in this context is its true synonym, are invariably taken to include biological agents used against animals and plants. Of great importance, although emanating from a state not party to the Protocol, is the position taken by the United States before the UN General Assembly in December 1966, and later at the Eighteen Nation Disarmament Conference, "that the term 'bacteriological methods of warfare' includes all 'biological' methods of warfare. More specifically, this prohibition [the Geneva Protocol] applies to all antipersonnel, anti-animal and anticrop biological agents. This position is supported by the negotiation history at Geneva in 1925". [106]

The Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction does not explicitly refer to the target organisms of the weapons it seeks to prohibit. That silence expresses the absolutely comprehensive character of the prohibition enunciated in the Convention. That is made evident by the choice of words in the ninth preambular paragraph: "Determined ... to exclude completely the possibility of bacteriological (biological) agents and toxins being used as weapons," and in Article I (b) which declares prohibited "weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict". (See appendix 4.) In the same words, Resolution 2826 (XXVI) of the UN General Assembly, which was adopted in 1971 by 110 votes with no opposing votes and with only one abstention, expressed the determination of the member states to exclude completely the possibility of bacteriological (biological) agents and toxins being used as weapons. Here as well, no doubt is possible on the comprehensive character of the prohibition envisaged as regards both the agents and the targets of attack.

There is no evidence that the comprehensive character of the prohibition of biological means of warfare embodied in the Geneva Protocol has ever been questioned. This is of great importance, also as regards the prohibition of *chemical* antiplant agents under the Protocol, because it implies that those who claim that the prohibition of *chemical* weapons does not extend beyond those substances which are used against *human beings,* must assume that the Protocol makes a distinction between

chemical and biological means according to the target of the attack. Yet nothing in the text of that document, in the circumstances of its conclusion, or in the subsequent interpretative practice of its parties indicates such a distinction.

There is no recorded evidence that antiplant agents were explicitly referred to either at the Versailles Conference or at the Washington Conference. At the Washington Conference, however, the prohibition that was being drafted was apparently understood to apply to CW "*in every form and against every objective*", in the words of the Report of the General Board of the US Navy, submitted to that Conference [107].

Historically, the *weapons*[65] whose use is prohibited by the laws of war were certainly those which had human beings as targets. The first experience with CW during World War I consisted only of attacks against human beings—limited in intent, if not altogether in effect, to combat troops—and it might therefore be thought that the authors of Article 171 of the Treaty of Versailles had in mind only the direct aggression against human lives by chemical agents when they formulated the prohibition of CW. Nevertheless, nothing in the wording of that treaty suggests anything of the kind, and in formulating the prohibition the authors chose a forward-looking and comprehensive definition of chemical weapons. The deliberately open character of the definition [108] demands an extensive interpretation. It covers the nature of chemical agents, their properties and the methods of their use. As for their possible targets, whatever the authors of Article 171 may have foreseen, the fact that they probably did not imagine attacks directed against livestock or food crops used by the enemy does not impose an interpretation which excludes such targets from the field of the prohibition. On the contrary, the very purpose of the drafters when they gave a broad definition to the prohibited weapons was precisely to go beyond the inevitable limitations of their own previsions.

It is incontestable that the expression "asphyxiating, poisonous or other gases, and all analogous liquids, materials and devices" does not directly suggest that herbicides and similar agents are comprised under the prohibition. Nor does it seem to *ex*clude them. When taken on its own, i.e., as it stands in the Versailles and Washington Treaties where biological weapons are not mentioned, it can be read either way. Had it not been for the Geneva Protocol, the restrictive interpretation would have appeared perfectly plausible.

But even supposing that the proper reading of Article 171 in the year

[65] That word being taken here in its technical sense, as contrasted with the more general term of "means of injuring an enemy" used in Article 22 of the Hague Regulations. Poison, in its pre-World War I form, cannot be called a weapon in this sense.

1919 was in the sense of a prohibition limited to CW against human beings, it would not follow that the interpretation of the Geneva Protocol must be given that same presumed meaning. Although it took up the 1919 formula, the Protocol is an autonomous instrument whose contracting parties and whose object are different from those of the Versailles Treaty and the interpretation of which is independent of that which was called for by Article 171.[66]

At the 1925 conference in Geneva, the delegates were evidently aware that CB weapons might conceivably be used against targets other than human beings. That is apparent both from the statement of the Polish delegate quoted above and from the fact that in 1924 the subcommittee appointed by the League of Nations to consider the question of CBW had asked a number of experts for a statement on the effect which would be produced on human life, animal life and "vegetable life" by chemical and bacteriological warfare. The report was made available before negotiations started on the Geneva Protocol.[67] Among its points, it dealt with the effects of CBW attacks on animals and plants—possible side-effects from attacks upon humans as well as attacks specifically directed against animals and plants. In the light of these two facts, the references of the Polish delegate and the report of the experts, and considering the unanimity in 1930 on the otherwise analogous matter of the tear gases, it is impossible to avoid the conclusion that the reason why no delegate raised the question of anti-animal and antiplant *chemical* warfare is that all who were present believed them to be prohibited as a matter of course.[68]

[66] Failure to recognize this can lead to the most curious forms of demonstration. As an example, consider the following chain of argument which Bunn regards as "evidence" that herbicides are not covered by the prohibition of the Geneva Protocol: (1) the Protocol took its wording from the Treaty of Versailles; (2) the latter was "probably" based on the Hague Regulations; (3) the Hague Regulations, apparently, did not prohibit chemical antiplant warfare *per se* since the United States Army field manual holds the destruction of crops by chemical means to be permitted under the Hague Regulations if it can be determined that the crops are intended solely for consumption by the enemy forces [109]. The US belief, expressed in the Army field manual, that certain forms of antiplant CW are not prohibited under Article 23 (a) of the Hague Regulations is, of course, of some, albeit limited, relevance for the interpretation of *those* regulations. But contrary to Bunn's contention, its relevance for the Geneva Protocol is absolutely nil. Besides, the preparatory committee to the Washington Conference had envisaged a prohibition of chemical warfare "against every objective" [110].

[67] See Volume IV, pp. 48 ff.

[68] In a letter to the *New York Times* (9 December 1969) Philip Noel Baker recalls "... a talk I had in Geneva while the Conference of 1925 was going on ... with a young French colleague, Henri Bonnet. ... 'Oh yes,' he said, 'the form of words they've got is good. It [the Geneva Protocol] prohibits every kind of chemical or bacterial weapons that anyone could possibly devise. And it has to. Perhaps someday a criminal lunatic might invent some devilish thing that would destroy animals and crops.' In 1925 everyone at the Conference agreed with Henri Bonnet. It was their purpose to ban all CB weapons; and they were satisfied that the Protocol would do that."

That is further evidenced by the fact that, in seconding the Polish proposal which explicitly mentioned plants and animals, the French representative believed that nothing new was being added to the prohibition. He declared that although "the extremely wide form of words" in which the prohibition of chemical warfare was expressed "should have been sufficient to cover bacteriological warfare, [it was] not always a disadvantage to make an explicit reference, as the Delegate from Poland had done". [111]

It has been said [112] that the French note of 1930 constitutes the only positive evidence from past history which supports the view that the Geneva Protocol does not cover herbicide warfare. This note interpreted the Protocol as applying "to all gases employed with a view to toxic action *on the human organism*" (emphasis added).[69] Actually, considering the context in which this statement was made—in a discussion on tear gases—it is clear that it does not demonstrate that herbicides are exempted from the prohibition, any more than it demonstrates the exemption of bacterial weapons or of non-gaseous chemicals from that prohibition.

From an examination of the disarmament negotiations in the decade following the signing of the Geneva Protocol, the same conclusion about the all-encompassing character of the prohibition emerges.[70] The draft disarmament convention drawn up by the Disarmament Conference of the League of Nations prohibited "the use, by any method whatsoever, for the purpose of injuring an adversary, of any natural or synthetic substance harmful to the human or animal organism" [114], and when it did not refer to plants this was undoubtedly due to the tendency—expressed in the 1924 experts' report—to dismiss as technically impossible chemical attacks on plants that would not simultaneously be injurious to human beings or animals [115]. Needless to say, the draft convention is not an interpretation of the Geneva Protocol. Its negotiation history, however, strongly suggests that the delegates at the League of Nations Disarmament Conference believed the two texts to be co-extensive in regard to agents and targets. The problem of plant and animal attacks was not, however, very widely discussed, and it never became the object of formal interpretative declarations similar to those on tear gas.

Until very recently, the subject did not attract much attention at all from writers on international law. Overweg maintained that chemical weapons comprised substances harmful to the human and animal organism [116]. It is not clear why he does not mention substances harmful to plants, as these would logically seem to be in the same category as anti-animal

[69] For the text of this note see pp. 52–53.
[70] See Volume IV and also the study by Blix [113].

agents. Kunz presents a convention outline according to which the use of chemical weapons is also prohibited against animals, vegetation or any sort of objects in enemy territory [117]. It is not clear from the text whether this is meant to be an interpretation of the Protocol or a proposal *de lege ferenda.*

Basing oneself on the inter-war history, no grounds can be found for excluding antiplant agents from the prohibition of the Protocol. The existing evidence, limited though it is, all indicates that these agents were believed to be encompassed by the prohibition of CB weapons.

But it must be noted that all the references from that period are to the destruction of the *means of subsistence* of the enemy. The possibility of using herbicides to destroy foliage providing cover for enemy forces does not seem to have occurred to anyone at the time. It could perhaps be claimed that these two situations are qualitatively different, so different in fact that, whereas the former is a genuine case of chemical warfare, in the latter case the physical (optical) effects are the purpose of the operation, and that in view of this, herbicides used for jungle defoliation are more akin to smoke-screens and should, together with screening smoke,[71] be held to be permissible means of warfare. Such an attempt to separate in law the CW waged against crops from CW waged against vegetation which hampers operations or jeopardizes security could not easily be shown to be unwarranted on the basis of evidence antedating the Viet-Nam War. Until recently this could be said to be a not altogether implausible interpretation of the Protocol. The main difficulty with this construction would have arisen from the fact that biological means of warfare, at any rate, are definitely prohibited, whatever the target and whatever the intended effects. It is hard to find in the Protocol or in other pertinent sources any grounds for making this distinction between the scope of the prohibition of BW and that of the prohibition of CW.

In any case, after the use of herbicides for purposes other than crop destruction gained practical importance in connection with the Viet-Nam War, it has become clear that there is no such distinction between crop destruction and other uses of herbicides in war, either as regards the practice of states, or as regards their beliefs about the legitimate or illegal character of such use. From the angle of the *weapon* used, states have maintained either that the Geneva Protocol prohibits both or, in a few cases, that it prohibits neither.

Resolution 2603 A of the UN General Assembly of 16 December 1969 declared as "contrary to generally recognized rules of international law

[71] See pp. 39–40.

as embodied in the Geneva Protocol ... [the use of] any chemical agents of warfare which might be employed because of their direct toxic effects on man, animals or plants". This formulation, beyond any doubt, also covers the use of antiplant agents against wild vegetation, regardless of the purpose. Half of those which were parties to the Protocol at that time showed their adherence to this interpretation by voting for the resolution, while many among those who abstained seem to have done so not because of a divergency over the interpretation of the Protocol, but for procedural reasons.[72] Only the United States and Australia, two of those who opposed the resolution, explicitly stated their belief that herbicides were not banned by international law. Malta had taken a similar position in 1967.[73] The British representative found that the evidence was inadequate for the assertion that the use of chemical substances specifically toxic to plants was prohibited. Later the British Government stated explicitly in Parliament that it did not regard herbicides as being covered by the Protocol.[74]

While it does not affect the legal status of the Protocol directly, the vote for this resolution and the fact that it was adopted by a large majority does have considerable importance, because it shows what the predominant interpretation of that document is. It is incontrovertible (and, by the principle of estoppel, legally binding) evidence of the beliefs of the majority of parties that the extensive interpretation of the Protocol is the correct one. In the case of irritant-agent weapons, the vote on this resolution could be taken as evidence that no erosion of the originally comprehensive character of the Protocol had taken place. In the case of herbicides, on the other hand, it is not certain that this is a case of an initially authentic interpretation of the Protocol being reaffirmed after having been challenged in words and in deeds by a few states. More probably, what has taken place in recent years is the development of an authentic interpretation on an issue on which, previously, there was none.

Altogether, then, several points emerge. First, it is clear that the use of biological weapons in the narrow sense[75] of living or dead organisms and their toxic products is prohibited by the Geneva Protocol, whatever the target. This strongly suggests—though it does not prove—that a similar conclusion applies to chemical weapons.

Second, it cannot, it seems, be doubted that in the inter-war period all

[72] See pp. 64–66 above.
[73] See Volume IV, p. 248.
[74] See Volume II. p. 201.
[75] As contrasted with the broad sense used in many US sources (including the Joint Chiefs of Staff dictionary quoted above) according to which chemical compounds used as plant-growth regulators are included not among chemical weapons, but among biological weapons.

agents, whether antipersonnel, anti-animal or antiplant and whether chemical or biological in nature, were believed to be comprised by the 1925 prohibition.

Third, the practice of states—at least since World War II when chemical herbicides were becoming a potentially useful weapon—establishing the agreement of the parties regarding the interpretation of the Protocol tells, if not absolutely unambiguously, in favour of the broad interpretation. It must be described as a practice of non-use, departed from only—as regards parties to the Protocol—by Britain in Malaysia and, reportedly, by Portugal in its African colonies.[76]

Fourth, a considerable majority of states have recently made explicit their adherence to that same extensive interpretation.

Fifth, the destruction of certain types of animal and vegetal targets is prohibited by general international law, irrespective of the means employed. As regards the use of herbicides for *crop destruction,* only small-scale use in exceptional circumstances where military operations or security considerations so dictate would seem to be compatible with the rule protecting civilians and civilian objects from becoming the target of direct attack. In the case of defoliation of *wild vegetation* or of *plantations,* it is rather the long-term effects which matter. These may be hard to reconcile with the principle demanding that the destruction caused be in reasonable proportion to the military purpose of the destruction. Even if it could not be maintained that a broad interpretation of the Protocol is unambiguously imposed, it is nonetheless only in a relatively limited set of situations that the use of antiplant agents might be held to be at all permissible. These consist principally of the use of chemical substances on a scale where ecological effects are not likely to occur, and their use against industrial crops serving as war munitions, against vegetation hampering military operations, or, under certain highly restrictive conditions, against food crops and domestic animals.

On the basis of textual interpretation and of the subsequent practice of states parties to the Protocol, the only possible conclusion is that the treaty contains an all-encompassing prohibition and that the restrictive interpretation is not in conformity with its legal scope.

As a result, a state, party to the Protocol, which made use of herbicides in war without having formulated an explicit reservation to the effect of excluding these agents from the scope of the prohibition,[77] would be

[76] Australia, in view of its participation in US warfare in Viet-Nam, should perhaps be added to this list, even though it does not seem to have used herbicides itself.

[77] In view of what has been said above such a reservation could obviously not be held to be incompatible with the object and purpose of the treaty. Regarding reservations, see pp. 79–89.

violating the obligations it had implicitly accepted upon becoming a party to that treaty.

On the other hand it must be recognized that for a state which, without having submitted a formal reservation regarding antiplant agents, has nevertheless consistently been advocating the restrictive interpretation in good faith, the illegal character of the use of herbicides in war (in those cases where it does not at the same time violate the general rules regarding the legitimate targets of attack) is not so manifest that such use could necessarily be held to be a crime on the part of individual commanders and soldiers. The text of the Protocol itself is sufficiently ambiguous, and subsequent interpretative practice sufficiently unclear that knowledge of the illegal character of the act might be lacking. In practice, therefore, in the absence of an explicitly stated consensus among the parties to the Protocol or of an interpretation of an obligatory character emanating from an international court, the extensive and restrictive interpretations of the Protocol are likely to remain in opposition.

III. *Reservations to the Protocol*

Many of the states which have ratified or acceded to the Protocol accompanied their act of ratification or accession by reservations.[78] These states include France, Great Britain and the Soviet Union. Below we shall attempt to clarify the meaning of the reservations and to assess the extent to which they remain of practical importance today. It will become apparent that the reservations have largely become obsolete, as a result, particularly, of the consolidation of the customary rule.

The reservations of different states are all identical in their essentials. They consist of two clauses. The first stipulates that the Protocol binds the reserving state only in regard to other states which have ratified or acceded to that agreement. This clause is actually superfluous because the operative part of the Protocol itself already stipulates that the contracting powers agree to be bound *as between themselves* by the terms of the treaty. Apart from being unnecessary, this part of the reservation (and, *ipso facto,* the corresponding part of the Protocol) must also be considered obsolete, owing to the emergence and consolidation of the customary rule. At least that abrogation of the clause has occurred to the extent that the customary rule and the conventional rule have become identical. It is only by claiming that the content of the custom is more restrictive than that of the convention that one could maintain that this clause retains

[78] The text of these reservations is given in appendix 2.

some validity. It will become apparent that the possible difference between the two rules is precisely the difference separating the extensive and restrictive interpretations of the conventional prohibition of chemical weapons. It follows that any reserving state which would propose today to apply this clause of the reservation to the limited extent to which that may seem possible could not do so in good faith unless it adheres to the *extensive* interpretation of the Protocol and to the *restrictive* interpretation of the customary rule. In practice, this is evidently a rather unlikely case, and it is probably not going too far to affirm that the first clause is completely obsolete.

The *second* clause of the reservations provides that the Protocol shall "cease to be binding [on the reserving state] toward any power at enmity with [it], whose armed forces, or the armed forces of whose allies, fail to respect the prohibitions laid down in the Protocol".[79] To clarify the very peculiar mechanism of this clause and the extent of its present validity, it is necessary to consider in turn its two aspects: on the one hand, the abrogation under specified conditions of the obligations which the Protocol confers upon the reserving state and, on the other, the affirmation by that state of the solidarity of allies.

First, as regards the *activation* of this second clause, it must be noted that this is not a general participation clause (*si omnes*), such as appears in the Hague Conventions of 1899 and 1907, and by the terms of which these conventions and the attached regulation did "not apply except between Contracting Powers and then only if all the belligerents [were] parties to the Convention".[80] For the Geneva Protocol, it is not the mere participation of a non-contracting belligerent state which entails the suspension of the conventional obligations, but an *act* contrary to the prohibitions formulated in the Protocol, and this is so regardless of whether the act is committed by a party to the Protocol or not. Moreover, that suspension of obligations affects only the relationship between reserving states and their enemies.[81]

[79] Reservation formulated by Great Britain, analogous to those of other states.

[80] Article 22. It is now universally admitted that this clause of the Hague Conventions should be considered obsolete, as those treaties have acquired the value of rules of customary law (cf. judgement of the International Military Tribunal of Nuremberg).

[81] Incidentally, it follows from this that the legal construction of the reservation is incoherent. On the one hand, the reserving states stress the contractual and relative nature of their obligation (in the first clause of the reservation). On the other hand they presuppose that the prohibition formulated in the Protocol is also binding on states which are not parties to it, for otherwise they could not attach legal consequence to the fact that a non-contracting state does not respect the Protocol. While the first clause affirms the purely contractual nature of the prohibitions, as does also the operative part of the Protocol, the second clause implies that these prohibitions are derived from an other than conventional source. The fact that a non-contracting state can activate

When a reserving state has established that a violation has occurred, and when in consequence it resorts in its turn to using CB weapons, it is not replying—as in the case of reprisals—to an illegal act by another illegal act. Its reply is not a prohibited act exceptionally authorized but is, by virtue of the reservation, an act which, as far as this belligerent is concerned, has ceased to be prohibited. While reprisals have the function and purpose of keeping valid the rule which has been violated, the reservation entails for a belligerent reserving state the *complete suspension* of the obligations enunciated in the Protocol for the duration of the hostilities in course.

The activation of this clause is therefore not a case of reprisal. Nor is it a simple application of the principle of reciprocity. Reciprocity means that to the extent to which one belligerent has infringed a rule of the conventional law of war, the other belligerent may in turn infringe the same rule. As in the case of reprisals, this principle serves to ensure the maintenance in effect of the rule which has been violated, and its application is also subject to restrictions. It is excluded in the case of certain rules or groups of rules, in particular the four Geneva Conventions of 1949, and it is limited by the principle of humanity and the principle of proportionality. Within these limits the principle of reciprocity is applicable, without any need to be stipulated, in the relationships between parties to the Protocol which have not formulated any reservations.

It is clear that, if it were fully applicable, this second clause of the reservation would greatly reduce the effectiveness of the Protocol and, for the reserving states, *reduce it to a simple no-first use declaration.* However, the clause has lost much of its importance as a result of the consolidation of the conventional prohibition into a rule of customary law, for it is certain that if an enemy belligerent, whether or not a party to the Protocol, does not respect the prohibition of the treaty, and if, as a result, an enemy reserving state were freed *ipso jure* from its conventional obligations, then this still leaves in force all the obligations resulting from the customary rule. Hence, once more, the suspension of the conventional obligations as a consequence of the violation has a practical import only to the extent to which it is possible to maintain that the conventional rule is more extensive than the customary rule. The customary rule therefore renders the reservations obsolete on this point to the same extent that it does the first clause; or, to put it differently, it transfers the rights which result from the activation of the clause from the sphere of the *suspension*

the reservation clause by an act which is not itself illegal also implies that one cannot—in the general case at least—describe the reservation as a sanction under the Protocol.

of a conventional obligation to that of reprisals against violations of the customary rule.

But even in the absence of the customary rule (which in effect annuls this clause), a reserving state could probably not, basing itself on the literal meaning of this clause, declare itself to be freed of all obligations under the Protocol. To be admissible a reservation must be compatible with the object and purpose of the treaty in question. [118] If it is not to contravene the object and purpose of the Geneva Protocol, the licence which the activation of this clause of the reservations gives a belligerent probably cannot extend beyond the implementation of countermeasures which are in reasonable proportion to the initial offence and which serve mainly to make the enemy belligerent desist from further violations. In consequence, the clause does not seem to confer upon reserving states, rights which are substantially in excess of the right of reprisals in kind.

Turning to the question of allies it may be noted immediately that this concept itself is vague from the legal standpoint and relative from the political point of view.[82]

The act which releases the mechanism of the clause is a violation of the prohibitions which are the object of the Protocol. This violation may be committed either against the reserving state or against one of its allies, because the words "fail to respect the prohibitions" cannot be interpreted to mean that the violations must be directed against the reserving state itself. In this way the clause affirms the *active solidarity* of the reserving state with its allies: the right of the reserving state to act in reprisals on behalf of its allies.[83]

This active solidarity is matched by a passive solidarity of allies by which (if the reservations clause were taken literally) all members of the enemy alliance are equally legitimate objects of reprisals, whichever the violating state. That solidarity is expressly provided for by the phrase "whose armed forces or the armed forces of whose allies".[84]

It is more difficult to clarify the way in which the customary rule has affected this second element of the second clause of the reservation: the extension of the definition of the act which constitutes a violation through the affirmation of the active and passive solidarity of allies. Like the

[82] The reservations formulated by the Soviet Union (and others) use the expression "allies de jure or in fact". (See, however, Bunn [119] on the ambiguity of this expression.)

[83] Actually, though this is of lesser practical importance, it is not even necessary—judging by the text of the reservation—that there be any alliance between the reserving state and the state which is the object of the initial attack for this principle of active solidarity to become operative.

[84] The expression "whose allies" should clearly be read to mean "one or several of the allies of whom".

Protocol, the customary rule does not specify the sanctions which apply, so that one is referred to the general rules relative to the sanctions for breaking the laws and customs of war, and first of all to reprisals. Is it possible that the reservations can change the general customary law of reprisals by extending the rights and responsibilities of belligerents to their allies?

The assumption envisaged by the reservation, namely the violation of the Protocol in the case of a war of coalition, is a very practical one. The clause reflects a genuine cause for concern, and seeks to provide a solution to a serious problem to which the law of war must find an answer in order not to be left behind by reality. That problem arises from the fact that, although multilateral in their form, conventions regulating the conduct of war are more akin to bilateral treaties once a war of coalition is under way. Moreover, a prohibition of specific methods of warfare—as also, for instance, a disarmament treaty—is such that a substantial violation by one party may radically affect the situation of all other parties, even those which are not formally affected. The solution chosen by the authors of the reservations consists in postulating the active and passive solidarity of the belligerents of each alliance. The advantages which this solution entails for creating initial restraint, and the dangers of subsequent escalation and proliferation of use if initial restraints prove insufficient, are equally obvious. The overall effect of equalizing rights and risks in relation to reprisals is to influence allies towards a common policy. This is particularly important when the capability for waging CBW and the vulnerability to this kind of warfare differ considerably among members of the same alliance.[85]

The sphere of reprisals does not *a priori* seem adverse to the concept of active and passive solidarity. Nor does that of treaty law in general. A concept of active solidarity is already contained in the reference to the right of *collective* self-defence enunciated in Article 51 of the Charter of the United Nations. Also, the Vienna Convention on the Law of Treaties entitles a party to suspend operation of a treaty if the material breach by another party "radically changes the position of every other party with respect to the further performance of its obligations under the treaty". [121] While this stipulation indicates an acceptance nowadays of

[85] Neinast shows awareness of this problem when, in connection with BW (but the argument is equally valid for CW) he writes: "Nevertheless, the United States' use of biological agents in any war is subject to the policy consideration of the possible effect of such use on the treaty obligations of those among its allies who are parties to the Geneva Gas Protocol" [120].

the concept of solidarity in the case of a certain category of treaties (of which disarmament treaties are the most obvious example), it does not on its own render legal the application of the concept of solidarity as regards the Geneva Protocol in particular. First, the Vienna Convention is not yet in force, and does not apply to treaties concluded before its entry into force. Second, and even aside from this, it is doubtful whether the said stipulation would have been directly applicable to the Protocol because the non-compliance of a state which is not a party to the Protocol may release the mechanism of the second clause of the reservation without being a "material breach" of the Protocol, and because it can be claimed that the Protocol should be considered as a provision "relating to the protection of the human person contained in treaties of a humanitarian character",[86] provisions which are explicitly excluded from the field of application of the above stipulation [123].

It is more doubtful whether a belligerent could invoke the concept of *passive* solidarity and initiate reprisals against a state other than that which is responsible for the initial violation. Such conduct would not conform with the generally accepted principle that responsibility rests with the state violating a treaty obligation. At the very least, active support of the violation by allies would have to take place before they could be regarded as co-responsible for the illegal use of CB weapons.

Regarding reprisals, Wengler, the author of a recent treatise on international law, observes that the theory of the strictly and exclusively personal character of the right of reprisals no longer agrees with the present state of international law. There are, nowadays, certain obligations of international law the violation of which confers upon all states the right to resort to reprisals in order to penalise the infringement [124]. This author discerns a trend in the direction of a universal prerogative for states to apply reprisals in case of a violation of international law, when a universal interest in ensuring the observance of an international norm must be presumed.[87]

In the final analysis, the second clause of the reservations is a true

[86] For example, a resolution adopted by the Institut de Droit International in 1971 lists among "humanitarian rules of armed conflict" the rules "prohibiting the use or some uses of certain weapons" [122].

[87] Because, in the opinion of the author, such a universal prerogative is indispensable if effective compulsion is to be at all possible in the case of certain norms of general international law. It is true that a little further on [125], the author seems to adopt a more prudent point of view when he says that the initiative of reprisals belongs to the state which has been the victim of a violation of the law of war, but that its allies may nevertheless join in reprisals. Yet, in practice, and particularly in an alliance between unequal partners, the distinction between initiation and association may be difficult to draw.

reservation because it effectively limits the applicability of the Protocol. This clause is outdated in its affirmation of the purely contractual nature of the prohibitions formulated in the Protocol and, therefore, of the right of the parties to abrogate them. On the other hand, that part of the clause which postulates the solidarity of belligerents in regard to the rule prohibiting the use of chemical and biological weapons has not been affected by the advent of the customary rule relative to the prohibition of CBW.

Actually, the converse might be closer to the truth. Most of the reserving states are now members of alliances, and the major alliances involve one or several reserving states. In a future war it is not impossible that the non-observance of the Protocol by one party would be considered by all enemy belligerents (provided there is one reserving state among them) as suspending their obligations towards the enemy state or towards the entire enemy alliance (to such an extent as the customary prohibition allows). This would be in accordance with the Vienna Convention on the Law of Treaties, according to which the tacit acceptance by one party of a reservation entered by another party modifies the treaty provisions to the same extent for the former in its relation with the reserving state [126].

To the extent that the solidarity of allies as regards reprisals against violations of the CBW prohibition does not contravene other norms of contemporary international law it therefore also seems justified to affirm that that solidarity applies to the customary prohibition. In any case it is clear that the solidarity of allies is not *per se* incompatible with the object and purpose of the Geneva Protocol and that at least from that angle it constitutes an admissible reservation.

A few of the states which have acceded to the Protocol in recent years have accompanied their accession by reservations similar to those discussed above. The question arises as to the meaning that such recent reservations may have and whether a state now acceding to the Protocol could formulate new reservations.

It follows from what has been said above that a reservation affirming the purely contractual character of the prohibition and the abrogation of the obligations of the reserving state in case of a violation (such reservations were made by Mongolia and Nigeria in 1968, by Israel in 1969, and by Kuwait and Libya in 1971) is no longer meaningful from the legal point of view and *contradicts the object and purpose* of the Protocol. With such reservations, any breach of the provisions of the Protocol would, in principle, and in the absence of the customary prohibition, permit any kind of escalation. For example, the use of irritant-agent weapons in war by one of those states which hold such use to be legal could be construed

by other belligerents as releasing them of all their obligations under the Protocol.[88]

On the other hand, it does not seem that any objection can be raised against a reservation affirming the common responsibility of allies in regard to the Protocol. The rights which this confers upon the reserving state are, however, limited by the fact that the reservation cannot abrogate the customary prohibition. The active and passive solidarity of allies cannot exceed that which generally holds under the customary rules governing reprisals, and it is doubtful whether an explicit reservation is needed for a state wishing to be able to fall back upon those rules.

In August 1970 the Geneva Protocol was resubmitted to the US Senate for its consent to ratification. The Administration proposed to attach a reservation as follows:

> That the said Protocol shall cease to be binding on the Government of the United States with respect to the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials, or devices, in regard to an enemy State if such State or any of its allies fails to respect the prohibitions laid down in the Protocol. [127]

This is consonant with the above remarks inasmuch as the clause on reciprocity does not appear. The second clause, affirming not only the right of reprisal in case of a violation but also the complete abrogation of the treaty as regards the defaulting state and its allies, is however retained. In view of the fact that the United States Government is defending the restrictive interpretation of the Protocol in respect of irritant-agent weapons and herbicides, *and* considers itself bound by a customary rule (the scope of which is, in its opinion, exactly similar to that of the Protocol so interpreted) it is difficult to see that any situations can occur in which the fact that the Protocol "ceases to be binding on the Government of the United States" is of any practical importance. This part of the proposed reservation seems entirely pointless. It may finally be noted that it is only in the case of chemical weapons that the United States proposes to retain the right to annul the provisions of the treaty if violated.[89]

[88] For another example of the way in which the guarantees provided by the Protocol or the customary prohibition are undermined by existing differences in interpretation, see p. 147–48.

[89] When the US President forwarded the Protocol to the Senate for its advice and consent to ratification, he included a report from the Secretary of State which commented upon the reservation and affirmed that as a result of it, the United States, unlike other reserving states, "would not assert by reservation the right to use bacteriological methods of warfare in retaliation" [128]. While this is of course literally correct it is nevertheless both incoherent and legally immaterial. First it is incoherent because the proposed reservation does not assert the right to use chemical weapons for retaliation (in kind)—that right exists regardless of any reservation—but the right to

Another question is whether it would be possible for a state now acceding to the Protocol to make its accession subject to a reservation restricting the scope of the prohibition in respect of irritant-agent weapons and/or herbicides. It may be noted that no state has so far formulated a reservation of this kind, and that in any case its putative advantages from the point of view of the military interests of the reserving state would at best be very slight, since the reservation, if it is not to contravene the object and purpose of the Protocol, could only claim exemption for methods of CW which are of marginal importance anyway.

As regards the legitimate character of such reservations it seems that the answer must be in the negative, at least in the case of irritant-agent weapons. Such reservations to the conventional prohibition would be not only pointless, but legally inadmissible, unless it could be shown that the use of the weapons in question is not already prohibited by the customary prohibition. Acceding to a conventional prohibition of more limited scope than a customary prohibition which already applies is evidently incompatible with the object and purpose of the treaty, which is to create new obligations or to reaffirm and strengthen existing ones. It has been shown, moreover, that the purpose of the Geneva Protocol, as made explicit by the parties to that treaty, was the prohibition of all methods of CBW which have human beings as targets, and, probably, of all methods of CBW whatsoever. For this reason a reservation seeking to exclude irritant-agent weapons and herbicides from the scope of the Protocol might be held to be legally inadmissible.

On the other hand it could probably not be considered manifestly incompatible with the object and purpose of the Protocol, and thus inadmissible *ipso jure,* if a state which accedes to the Protocol and which has defended the restrictive interpretation of the customary prohibition formulates a reservation excluding antiplant agents—and these only—from the prohibition of the Protocol.[90]

use them for purposes *other than retaliation* once the use of chemical weapons has begun. Second, it is immaterial: in view of the obligations imposed by the customary prohibition which the reservation cannot bypass, biological weapons can certainly not be used legitimately for any *other* purpose than reprisals in kind. But if states generally enjoy such a right (which, as noted on pp. 148–50 below, is very doubtful indeed), the United States does not renounce that presumed right merely because it fails to affirm it in its proposed reservation to the Protocol. Only a positive undertaking could have that effect.

In 1930 the Netherlands filed a reservation making a similar distinction between BW and CW (see appendix 2, p. 153), but at that time it was a real distinction between the acceptance by the Netherlands of a *prohibition* of biological weapons (subject, as always, to the right of reprisals in kind in so far as these are in accordance with other precepts of the law of war) and a *no-first-use engagement* in the case of chemical weapons.

[90] See above, p. 78.

In any case, a reservation regarding irritant-agent weapons or herbicides would in fact amount to an offer by the reserving state to all other parties of a *new* treaty, more limited in scope than the Geneva Protocol, to be accepted on a bilateral basis. Under such circumstances each of the other parties to the Protocol (most of which hold the prohibition to apply to all CB weapons) would be entitled to offer objections.[91] Such formal objections might mean either of two things: they might mean that treaty relations are refused between the reserving and objecting states as concerns the treaty as a whole; alternatively, they might mean that the specific provisions to which the reservation takes exception (in this case the prohibition of those specific agents which the reserving state seeks to exclude from the prohibition) do not enter into force between those two states [129]. In any case the principle of reciprocity ensures that the reservation would be applicable to both parties, whether or not an explicit objection has been made [130].

Only in cases which are unlikely to occur in practice would a formal reservation excluding herbicides or irritant-agent weapons from the scope of the Protocol make sense. Implicitly, it presupposes that the reserving state adopts a *restrictive* interpretation of the customary rule (otherwise the reservation would not release that state of any obligations) and an *extensive* interpretation of the Protocol (which it is the purpose of the reservation to restrict). A formal reservation to exclude certain weapons from the scope of the Protocol is an implicit admission that the correct interpretation is broader.

Rather than submitting a reservation, the acceding state might prefer to submit a declaration expressing its understanding that the prohibition does not cover irritant-agent weapons or herbicides, thus avoiding an explicit admission of the extensive character of the prohibition of the Protocol. It has been seen, however, that the ambiguity of the Protocol is not as great as may appear, and the latitude it offers is not such as to permit a restrictive interpretation. In view of the wide agreement on the extensive interpretation, both in regard of irritant-agent weapons and of herbicides, there is no doubt that, faced with a declaration by a newly acceding state which attempts to exclude these means of warfare from the prohibition, other parties would be entitled to treat this interpretation as though it were a reservation because its effect would be to bring about a deviation from the treaty.

A third approach is that which was advocated by the US Administration when it resubmitted the Protocol to the Senate in 1970. It is to ratify the

[91] If the reservation is incompatible with the object and purpose of the treaty it is excluded *ipso jure*. Only if this is not the case does the question of the subjective condition of the consent of other parties arise. (Cf. the distinction between Articles 19 and 20 of the Vienna Convention on the Law of Treaties.)

Protocol without attaching any formal declaration or reservation regarding the agents and targets to which it applies, but, instead, to make it clear in a public statement that the United States "understands" the treaty restrictively [131]. Such a statement is not an international act which enables other states to offer objections or refuse treaty relations if they consider this restriction of its scope to be unacceptable. But precisely for this reason it is *not a reservation,* and as such it does not have the legal implications of a reservation. The legal implications of this "understanding" by the United States would not differ in any way from those of the British, Australian, Belgian and Maltese declarations discussed previously.[92] These, too, were simply statements of opinion regarding the scope of the Protocol. Without a formal reservation to that effect, the treaty cannot have a different content for different states, and these declarations can therefore not render legal the use in war of irritant-agent weapons or herbicides by Britain, Australia, etc. The views of these states favouring the restrictive interpretation are simply evidence—but not, as was noted, very weighty evidence—telling in favour of the opinion that the restrictive interpretation is the correct one. If it is not correct, then the use of herbicides or irritant agents in war is illegal for *all* countries, whatever views they may hold on the interpretation of the treaty.[93]

The fact that the views and practice of the United States are irrelevant for the interpretation of the Geneva Protocol has been stressed repeatedly. It is, therefore, reasonable to note here that *if* the United States were to accede to the Protocol with a *formal reservation* regarding irritant-agent weapons and herbicides (such a step is not now being contemplated) and if treaty relations on a basis thus narrowed were accepted by other parties to the Protocol, then this would have an immediate and wide-ranging effect on the scope of that treaty. This is not only due to the weight of the United States in international relations and the likelihood that other states would follow its lead. Rather, this follows from two of the above remarks: the principle of reciprocity by virtue of which a reservation limiting the scope of a prohibition automatically becomes bilateral, and the existence of the reservations which tend to equalize conditions for states belonging to the same alliance. In view of the wide present-day coverage of alliances centred around the United States or in the position of possible enemies to the United States, reservations formulated by that country would tend to proliferate very widely.

[92] See above, pp. 66 and 77.

[93] However, the illegal character of an act of violation may be less *flagrant* in the case of states which believe, even if mistakenly, in the restrictive interpretation. In the penal pursuit of responsible commanders, such facts would have to be taken into account.

Chapter 4. General precepts of the law of war applicable to CBW

As noted there are certain general precepts of the law of war which, without referring directly to CB weapons, nevertheless proscribe certain or all ways of using them in war because of the particular nature or effects of these weapons. The most important of these rules are the principle of the immunity of the civilian population, the prohibition of poison and poisoned weapons, and the prohibition of weapons of a nature to cause superfluous injury.[1] As a result of the consolidation of the customary prohibition of CBW, the importance of these rules from the point of view of the limitations they impose on the use of CB weapons is decreasing.

Needless to say, other rules, which neither directly nor indirectly relate to CBW, are nevertheless pertinent to an assessment of the legality of particular ways of using these weapons in tactical operations. For instance, the 1949 Geneva Conventions demand the humane treatment in all circumstances of "members of [enemy] armed forces [who have been] placed hors de combat by sickness, wounds, detention *or any other cause*" (emphasis added) [136]. One may attempt to use this rule to pronounce on the legality of the practice in Viet-Nam whereby tear gas has been used to flush enemy personnel out of tunnels and hide-outs, sometimes with a view to wounding or killing them by other means afterwards. Seen from this angle, this practice may be illegal irrespective of the means used to flush the hide-outs [137]. It would lead too far to discuss this and similar cases, particularly as it involves not only legal interpretations but also questions of material fact.

The three above-mentioned rules, which all derive from the Hague Regulations of 1899 and 1907, were at first conventions but are now universally recognized as belonging to the customary international law of

[1] There has been much discussion as to whether the *Martens Clause* which figures in the preamble of the Hague Conventions of 1899 and 1907 should be considered as a general principle of the law of war and whether it provides a test of the legality of new weapons [132-135]. The clause states: "Until a more complete code of the laws of war is issued the High Contracting Parties think it right to declare that, in cases not included in the Regulations adopted by them, populations and belligerents remain under the protection and empire of the principles of international law, as they result from the usages established between civilised nations, from the laws of humanity, and the requirements of the public conscience."

war. This means that in assessing their present validity and scope, significance must be attached to the practice and the beliefs of states—as expressed, for instance, in military manuals—and, as a subsidiary factor, to the opinions of publicists from various nations.

I. *Principle of the immunity of the civilian population*

Although seriously violated in practice by the belligerents in both World Wars, the distinction between combatants and the noncombatant population is still one of the basic principles of the law of war. The systematic violations of that principle have narrowed its tenor considerably, but it remains an imperative juridical norm.[2]

Military manuals on the law of war continue to present this norm as having binding force. On the subject of air bombing, the US field manual says that "There is no prohibition of general application against bombardment from the air of combatant troops, defended places or other legitimate objectives" [140] and the US Navy manual states that "Belligerents are forbidden to make noncombatants the target of direct attack in the form of bombardment, such bombardment being unrelated to a military objective. . . . Bombardment for the sole purpose of terrorizing the civilian population is prohibited." [141] The German directive states that Articles 22 and 23 (e) and (g) of the Hague Regulations concerning the laws and usages of land warfare are applicable to strategic air warfare, and deduces that indiscriminate area bombing is prohibited.[3] [143] Nor can it be

[2] The draft rules to limit the risks to civilian populations in times of war, drawn up by the International Committee of the Red Cross in 1956, may be cited. They do not constitute a text of positive law; but they constitute a carefully worded document, evidently concerned with avoiding the charge of "idealism". Article 6 may be considered as expressing the status of positive law on the subject: "Attacks directed against the civilian population, as such, whether with the object of terrorising it, or for any other reason, are prohibited. This prohibition applies both to attacks on individuals and to those directed against groups. In consequence, it is also forbidden to attack dwellings, installations or means of transport, which are for the exclusive use of, and occupied by, the civilian population. Nevertheless, should members of the civilian population, Article II notwithstanding, be within or in close proximity to a military objective they must accept the risks resulting from an attack directed against that objective." [138]

A more recent text drawn up by the same body in 1972 is the Draft Additional Protocol to the Four Geneva Conventions of 12 August 1949. Article 45 provides: "1. The civilian population as such, as well as individual civilians, shall never be made the object of attack.

2. In particular, terrorization attacks shall be prohibited . . ." [139].

[3] For a general definition of military objectives—the only legitimate targets—this publication refers to the proposed rules drafted in 1923 by a committee of jurists meeting at the Hague. It also bases itself on these in declaring the prohibition of

maintained that Allied area bombing in World War II and the use of blind flying bombs by the Germans have resulted in legalising indiscriminate bombing. Such an abrogation of the norm protecting the civilian population would presuppose a conviction as to the legality of that practice, and there is no such conviction.[4]

The principle of the immunity of the civilian population has been reaffirmed in several recent resolutions on the law of armed conflict.[5]

The principle of the immunity of the civilian population means, first of all, that the civilian population must not be the object of attacks directed specifically against it, regardless of the weapons used or the purpose of the attack. But, however relative it may have become, the principle of the immunity of the civilian population is not limited to this prohibition of direct attacks. It also demands that the belligerents plan and execute their attacks against legitimate targets in such a way that the inevitable damage to civilian lives and property will not be out of proportion to the military advantage which was the purpose of the attack. Difficult to define and delicate to execute, that prescription is nonetheless a definite rule of the customary law of war. The implication of this rule for the legality of large-scale use of chemical weapons which may involve unintended ecological or long-term health hazards has already been noted in connection with the use of herbicides in war.

In relation to the principle of the immunity of the civilian population, biological weapons are not in quite the same situation as chemical weapons. The chemical warfare conducted from 1915 to 1918 showed that it is possible—in some cases at least—to confine the effects of chemical weapons

bombing conducted in an effort to break the will to fight of the civilian population. "Nor may non-combatants be made the direct targets of an attack when they carry out an activity of importance for the war effort (for example workers in armaments industries). Above all, however, attacks to terrorise the civilian population are contrary to international law." [142]

[4] Retrospectively, a number of Anglo-American authors express doubts as to the legality of target area bombing [144–147].

[5] See among others Resolution 2444 (XXIII) adopted unanimously on 19 December 1968 by the UN General Assembly which cited and affirmed resolution XXVIII of the twentieth International Conference of the Red Cross held at Vienna in 1965. The latter laid down, *inter alia,* as a principle for observance by all governmental and other authorities responsible for action in armed conflicts, "that it is prohibited to launch attacks against the civilian population as such" and "that distinction must be made at all times between persons taking part in the hostilities and members of the civilian population to the effect that the latter be spared as much as possible".

Resolution 2675 (XXV) adopted at the 25th Session of the UN General Assembly by 109 votes in favour, none against and 8 abstentions, declared in its operative paragraph 3 that every effort should be made to spare civilian populations from the ravages of war and all necessary precautions taken to avoid injury, loss or damage to them. See also the resolutions adopted by the Institut de Droit International at its session at Edinburgh in 1969 [148] and at Zagreb in 1971 [149].

predominantly to the fighting forces. These weapons, *by their nature,* are, therefore, no more contrary to the principle of immunity of the civilian population than are conventional weapons.[6]

In the case of biological weapons, too, it might be possible to conceive of situations in which the effects of an attack with these agents could be limited to the enemy combat forces, but a limitation of that kind must undoubtedly be regarded as exceptional. This follows from the fact that, from the point of view of those military theorists who have advocated the use of biological weapons, the usefulness, if any, justifying their employment resides in precisely those properties which distinguish them from other weapons, including chemical weapons, and which violate or are capable of violating the principle of the immunity of the civilian population: contagiousness, delayed effects, insidious action, unpredictable effects, and difficulty of detection and identification. If a belligerent were seeking to limit the effects to enemy troops, it seems unlikely that he would use biological weapons at all.

II. *Prohibition of poison and poisoned weapons*

Article 23 (a) of the Hague Regulations of 1899 and 1907 prohibits the use of poison or of poisoned weapons. This prohibition nowadays has the force of a rule of customary law. The main questions which arise are, first, the nature of the substances—chemical and biological—and the degree of harmfulness which are implied by the concept of poison, and second, whether the methods and scale of dispersal which are nowadays referred to as chemical and biological warfare are so qualitatively different from those envisaged at the Hague Conferences that this prohibition is inapplicable to modern means of CBW.

Since the law of war does not define what must be understood by "poison", we are referred to the ordinary meaning of that term. In scientific as in everyday language, the word "poison" designates any substance capable of causing death or injuring the health [150].

Various arguments have been put forward to try to show that the customary rule prohibiting the use of poison does not apply to CBW.

[6] With such contemporary types of chemical weapons as nerve gases, which have a vastly greater toxicity per weight of agent than those of World War I, and with current carriers and payloads, it is by no means certain that their effects could be confined to the fighting forces (see Volume I, pp. 101–102; Volume II; and Volume V, pp. 81–82). CW cannot be condemned *en bloc* as incompatible with respect for the civilian population (as BW probably can), nor can it be exculpated *en bloc* from that charge.

Support was first sought in the foundation attributed to that prohibition. The rule is often linked with the prohibition—also customary—of treacherous methods of warfare [151–152]. If the treacherous character of the use of poison and poisoned weapons could be shown to be the *ratio legis* of its prohibition, then it would be possible to maintain that not unless it were conducted covertly would CBW constitute "use of poison" in that sense. Kunz, for instance, has suggested that because the open use of gas is not perfidious, it is legal [153].

Those who have held such views may well have been unduly influenced by the association of the prohibitions of poison and poisoned weapons and of treacherous methods of warfare in Article 23 of the Hague Regulations. In fact these prohibitions are enunciated in separate paragraphs and there is no indication that one prohibition is inferred from, or justified by, the other.[7] In any case it is certain that whatever the explicit reasons initially invoked to justify the prohibition of poison and poisoned weapons[8] (Gentili, writing in 1589, listed nineteen such reasons, including the clandestine and malicious character of the use of poison), the prohibition is not limited to their covert use. It also applies when the poison is used openly, as it may be in cases of poisoning of wells or foodstuffs.[9]

Nor is the prohibition limited to the poisoning of single individuals.[10]

Finally, it has been claimed that the prohibition of poison should cover only forms of chemical and bacteriological warfare known in 1907 [159–162], in other words, that any poison discovered and any poisoned weapon

[7] See appendix 1. Schwarzenberger has shown how a similar confusion regarding the *ratio legis* of the prohibition of poison has arisen from the undue association of paragraphs (a) and (e) of Article 23; i.e., from the association of the prohibition of poison and poisoned weapons with the prohibition of means calculated to cause unnecessary suffering [154].

[8] Whatever the justifications given by contemporary authors, the reasons for the (re-) emergence of the prohibition of poison in Europe between the fifteenth and eighteenth centuries were no doubt closely related to the naturalist conception of war as a contest between states to be decided by the use of force, not of magic and malice. This conception itself seems understandable in terms of the material conditions of warfare at the time, including the predominant role of mercenary armies and the security requirements of princes and military commanders [155].

[9] According to the British military manual, "Water in wells, pumps, pipes, reservoirs, lakes, rivers and the like, from which the enemy may draw drinking water, must not be poisoned or contaminated. The poisoning or contamination of water is not made lawful by posting up a notice informing the enemy that the water has been thus polluted." [156]

[10] For example the 1863 "Lieber Instructions" for armies of the United States stipulate that "The use of poison in any manner, be it to poison wells or food or arms is wholly excluded from modern warfare. He that uses it puts himself out of the pale of the law and usages of war." [157] Similarly, the German *Kriegsbrauch im Landkriege* (1902) mentions the prohibition of "the use of poison against enemy individuals and against masses (poisoning of wells and food, dissemination of contagious diseases, etc.)" [158].

invented after 1907 should be exempted from the prohibition.[11] But this prohibition does not date from 1907. Nor does it stop at the methods known at that time, for a method of warfare which satisfies the definition of a poison or of a poisoned weapon is only exempted from the customary rule prohibiting such means if a specific norm has developed to that effect, whether in the form of a convention or of a custom.[12]

According to another line of reasoning, the definition of poison applies to CB weapons in principle, but they are nevertheless excluded from the prohibition for two reasons: first, it is said, the prohibition was aimed only at marginal methods of warfare, not at weapons in the technical sense; secondly, the very fact that the states found it necessary to state the prohibition of CBW in a treaty specially concluded for that purpose, the Geneva Protocol, should prove that in their opinion such methods did not come under the prohibition of poison. [166]

The first line of reasoning is probably historically correct, but the conclusion derived from it does not follow. Theoretically, a new customary rule could have developed to exclude CBW in the modern sense—and, specifically, the militarily significant gases used in World War I—from the scope of application of the prohibition of poison. In fact, what happened was the exact opposite. Despite its general usage in World War I, gas warfare was explicitly condemned and proscribed (the Versailles Treaty referred to the use of gas in war as "being prohibited"), and this was done on the grounds, *inter alia,* of it being subsumed under the prohibition of poison. As early as March 1918, representatives of the military authorities of the United States, France, Great Britain, Belgium, Italy and Portugal had informed the International Committee of the Red Cross that they considered the use of toxic and asphyxiating gases as being included in the prohibition of poison, and also in the prohibition of weapons, projectiles or materials of a nature to cause superfluous injury. From its origin, the rule prohibiting modern types of chemical warfare has been linked to the prohibition of poison. Whether that subsumption, assimilation or analogy is scientifically and legally justified is of relatively secondary interest, particularly in view of the fact that the existence of a customary rule prohibiting modern types of gas warfare is no longer a matter of controversy.[13]

[11] Needless to say, that view is not shared by all authors. Greenspan, for instance, maintains that gas and bacteriological warfare are particular instances of infringements against the general prohibition of Article 23 (a) [163], and Singh maintains that "anything" which is poisonous is covered by that article [164].

[12] In any case the Martens Clause in the Preamble to the Hague Conventions (see note 1, p. 90) was precisely meant to forestall such argument *a contrario* [165].

[13] See p. 126 below.

As for the other part of the argument, it is true that the authors of the Treaty of Washington and the authors of the Geneva Protocol did give the prohibition the form of a new conventional rule. According to the circumstances, this may either mean that they created a new rule, or else that they codified, and perhaps clarified, an already existing customary rule. However, it is clear that the treaties of 1922 and 1925 did not formulate a new rule, but reiterated the rule expressed in Article 171 of the Treaty of Versailles, itself conceived as being of a declarative character. Moreover, the Protocol refers to extra-contractual and consequently pre-existing sources: "the general opinion of the civilized world" and the idea of an obligation "binding alike the conscience and the practice of nations", and to conventional rules which, unless they be the Versailles and other peace treaties, have today the character of customary rules.[14]

As regards *biological* weapons—and aside from the question of whether this type of weapon is also forbidden by a customary rule analogous to the Geneva Protocol—it is indisputable, first, that toxins, evidently, come under the definition of poison [167–168]. Second, it is certain that no rule of customary law has emerged which could have the effect of excluding biological agents from the prohibition of poison. In fact, the Hague Regulations appear to have implicitly included the spreading of contagious diseases under the heading of "poison and poisoned weapons", for as the minutes of the two Hague Conferences show, the expression was taken over without discussion from the Declaration of the Brussels Conference of 1874 [169], which had never been ratified by the governments but formed the basis for the Hague Conference of 1899. The records of the Brussels Conference show that in 1874 the reference to poison and poisoned weapons was meant to include the spreading of disease on enemy territory [170]. In line with this, the US Army manual from 1914 (as well as the manual from 1940) stated that the prohibition of poison expressed in Article 23 (a) of the Hague Regulations applied "to the use of means calculated to spread contagious diseases". [171]

III. *Prohibition of weapons of a nature to cause superfluous injury*

Article 23 (e) of the Hague Conventions forbids the use of "weapons, projectiles or materials of a nature to cause superfluous injury". The content of this prohibition is even more difficult to specify concretely than

[14] In 1925 the rules contained in the Fourth Hague Convention were not generally considered to be part of the customary law of war.

that of the principle of the immunity of the civilian population—and yet it is unquestionably a norm in positive law.

It is to be noted that the effectiveness of a weapon does not relieve it from this prohibition. It is false to claim that the law of war prohibits only ineffective means. Recourse to a prohibited means of injury may lead to victory and thus make it impossible to prosecute those responsible for war crimes, but it cannot cleanse violations of Article 23 (e) of their criminal character.

The interpretation of the rule has been obscured by a semantic confusion which has lasted nearly a century. The formula goes back to the preamble of the Saint Petersburg Declaration of 1868, which envisaged the *unnecessary suffering* of soldiers caused by certain weapons. However, although it was inspired by the 1868 declaration, the proposal for an international declaration concerning the laws and usages of war, prepared by the Brussels Conference of 1874, put this idea of unnecessary suffering in a broader perspective. Its Article 13 (e) declared prohibited the use of arms, projectiles or materials of a nature to cause *superfluous injury* (*maux superflus*), as well as the use of projectiles prohibited by the Saint Petersburg Declaration. This concept of superfluous injury is an objective concept and is more comprehensive than the idea of unnecessary suffering because it takes into consideration all forms of injury, not merely bodily or mental suffering.

The expression was retained in Article 23 (e) of the Hague Conventions of 1899 and 1907, but the confusion which consists in narrowing that objective idea by reducing it to the subjective concept of unnecessary suffering had already arisen and has remained firmly implanted. The manual of the laws of land warfare, published in 1880 by the Institute of International Law, borrowed the earlier formula from the Saint Petersburg document. And while the official English translation of the French text—the authentic text—of the Hague Convention of 1899 rendered the expression *maux superflus* correctly as "superfluous injury", the official but not authentic English text of the Hague Convention of 1907 reverted to the former expression "unnecessary suffering"[15] for reasons which are inexplicable (and probably fortuitous, and legally irrelevant anyway).

The application of this rule to biological weapons raises fewer problems than its application to conventional weapons or chemical weapons, for the reasons we have mentioned above in connection with the principle of

[15] The official German translation uses the same improper expression (*unnötig Leiden*). The French decree of 1 October 1966, containing general disciplinary regulations for the armed forces, correctly uses the two concepts in combination by forbidding in its Article 34 (2) the use of any means which cause unnecessary suffering or damage (*moyens qui occasionnent des souffrances et des dommages inutiles*).

the immunity of the civilian population. Actually, biological weapons are characterized by the fact that their harmful effects are likely to reach the civilian population—even if the population is not directly attacked—to an important and unpredictable extent which can rarely be said to be in reasonable proportion to the military objective pursued. It is the absence of *reasonable proportion* to a *legitimate* military advantage which distinguishes weapons or means "of a nature to cause superfluous injury".

Chapter 5. The customary prohibition of CBW

The several rules considered in the preceding chapter, while not specifically referring to chemical or biological weapons, nevertheless proscribe some of the possible ways of using these weapons in war. Today all of these rules are universally recognized as belonging to the customary law of war. As such, they are binding upon all states, whether or not these states were or are parties to the particular conventions in which the rules have been formulated. In this chapter we consider the customary rule which specifically prohibits the use of chemical and biological weapons and which is broadly similar in content to the Geneva Protocol.

The evidence for the existence of a custom is necessarily more elusive and more easily challenged than is the evidence for a treaty obligation. Given the similar scopes of the conventional and the customary prohibitions and the likelihood that accessions to the Geneva Protocol will become universal in the not too distant future, the question naturally arises whether the importance of the customary prohibition is not mainly historical and why we have chosen to deal at length with the existence and content of a rule whose essentials merely duplicate the conventional prohibition. In fact, there are several reasons why the existence of the customary rule is of practical importance and adds significantly to the prohibition contained in the Protocol.

First, a customary rule, in contrast to a convention, is binding irrespective of the possible contrary wishes of any particular state. Whatever right a state might have to withdraw from its obligations under the Protocol—a "right" which is highly questionable in view of the fact that it must probably be regarded as a treaty of a humanitarian character—no such right can exist in regard to the customary norm. The abrogation of that rule can only occur through the gradual development of a custom to that effect. Moreover, the existence of the customary rule is an indication that the prohibition is not only a contractual obligation, freely entered into, and based on considerations of expediency, but that it is also a moral imperative. The constraints which operate in specific situations where there might be a temptation to use CB weapons are evidently enhanced by this non-contractual character of the customary prohibition. Thus, both legally and psychologically the simultaneous existence of a customary rule

confers greater long-term stability and greater short-term effectiveness on the overall prohibition.

Second, a conventional prohibition binds states in regard to one another but is not normally applicable except to inter-state conflicts. The customary prohibition, however, is not subject to such strict limitations.[1] The wider and more ill-defined category of situations to which it applies is particularly important in view of the haziness of the concept of international war and the increasing importance of conflicts, the characterization of which is open to dispute. In this way the customary rule might be seen on the one hand to extend the range of applicability of the conventional rule, and on the other hand to strengthen it by reducing the risk of escalation which results from the combined effect of the right of reprisals and of ambiguities regarding the field of application of the prohibition.[2]

Third, it was noted that a large number of states acceded to the Protocol subject to a reservation which abrogates the obligations under that treaty for the entire duration of hostilities in case one of the enemy states initiates the use of CBW.[3] With this reservation, the Protocol, taken literally, is reduced to a first-use prohibition, instead of being a complete prohibition, subject only to the right of reprisals.[4] In this case, too, the customary rule, which, in case of a violation, can only be infringed—if at all—for the sake of reprisals, but cannot be abrogated as can the conventional prohibition, effectively strengthens the prohibition contained in the Protocol because—to the extent that it is otherwise co-extensive with the Protocol—it nullifies the effect of that clause of the reservations and commutes these no-first-use obligations into full prohibitions.

Finally, of course, the customary rule is binding on those states which have not formally acceded to the Protocol and to a certain extent on bodies such as insurgents and provisional governments which may be in no position to accede to it.[5]

The reference here to a rule "broadly similar to the Geneva Protocol" needs clarification. By this we refer to a customary rule which either developed from the Geneva Protocol (in the same way in which the Hague Regulations, originally conventional rules, have become embodied in customary law) or which existed prior to the Protocol and of which the latter is a more or less faithful codification. It cannot be assumed, however, that the two rules have exactly the same content, because the argu-

[1] See the discussion in chapter 2, p. 29 above.
[2] See chapter 6, p. 147.
[3] See chapter 3, pp. 79–89.
[4] A right which is itself narrowly circumscribed; see chapter 6.
[5] See chapter 2, p. 29 above.

ments used above in determining the scope of the Geneva Protocol are no longer pertinent, or not pertinent to the same extent, when interpreting a customary rule: the methods of formation of the two kinds of rules are different and the rules, consequently, need not be strictly co-extensive. For the interpretation of the customary rule, the close-reading of the 1925 document is largely immaterial as are references to the original intentions of its drafters. In contrast, the subsequent statements and behaviour of states are of paramount importance. Most important in practice is the fact that the views and acts of the United States, which have no direct relevance for the Geneva Protocol, cannot be ignored when interpreting the customary rule. It is precisely because the attitude of the United States may be ignored that the Geneva Protocol is much less ambiguous than is generally assumed. For the same reason, the ambiguity regarding the extensive and the restrictive interpretations cannot be so easily settled in the case of the customary prohibition.

The analysis is therefore conducted in two steps. First, the existence of a customary rule analogous to the Geneva Protocol is demonstrated, but its exact coverage is left open. Second, the existence of this rule having been established, the arguments in favour of its broad and restrictive interpretations are surveyed.

I. *Existence of a customary prohibition*

"Custom", says Oppenheim, "is the older and original source of international law. ... International jurists speak of a *custom* when a clear and continuous habit of doing certain actions has grown up under the aegis of the conviction that these actions are, according to international law, obligatory and right." [172] To the same effect, though less explicitly, Article 38 of the Statute of the International Court of Justice refers to "international custom, as evidence of a general practice accepted as law". Here again, the same two elements are found: a general practice, and the fact that this practice is the expression of a general legal conviction.

Both these elements—the *material* element which consists of the continued submission to the rule by all, or almost all, of the states concerned, and the *psychological* element which consists of the conviction of these states that their conduct corresponds to a legal obligation—must be examined in order to determine the existence of a customary rule prohibiting CBW. [173–174] Consequently, the following types of question will have to be considered: What are the number and importance of those states which do and do not follow the practice in question? How conclusive

are the various facts pointing towards the existence of a legal conviction? Have states expressed reservations or protests against the assumption that their restraint from using CB weapons in war is the result of a legal conviction? How important are the deviations from a practice of non-use which have occurred, or have been alleged to have occurred? and so forth.

When the customary rule is a prohibition, international practice—the material element of the custom—evidently consists in abstention from the prohibited act. It is not disputed that such abstention can constitute a "general practice" [175–176]. To demonstrate the existence of a practice of this kind one must show that some states have been in *situations* to which the rule applies, that they have had the material *possibility* of committing the prohibited act, but that they have *deliberately abstained.*

It is important to be clear about what needs to be shown in regard to the psychological factor and what need not, since some texts are somewhat confused on this point. Brungs, for instance, in seeking to show that the United States is not bound by any legal norm in respect of CB weapons, maintains that the United States has not used these weapons since 1918 because of political considerations alone, not from any legal conviction [177]. In an attempt to demonstrate the same point, Kelly maintains that "Considerations of public opinion and the fear of retaliation by the enemy upon the United States or upon its more exposed allies have been the chief factors." [178]

Clearly, this is completely irrelevant. To establish a custom of non-use, one must show that the practice of non-use was *accompanied* by a belief that use would have been illegal, not that this belief and an intent to respect the law for its own sake were the principal *causes* why the weapons were not used. The *motives* for a particular line of conduct do not matter [179], and those which Kelly adduces—fear of the material consequences and of public opprobrium—are merely some of the reasons which quite generally lead governments and individuals to abide by the law.

In particular, the elaborate discussions sometimes found on whether a given case of non-use of CB weapons is due to respect for the law or to fear of reprisals are futile in this context. Normally the two factors go together and are impossible to separate. The conviction that a particular conduct is illegal, as also the moral incentive to refrain from it, often arise from awareness of the community reaction against it. The fear of retaliation (in kind or otherwise) or simply of reprobation is generally a part of the psychological element of a custom. It has both a preventive and a sanctioning function (by anticipation), and even if it were the only reason why governments comply with the rule, this does not preclude a belief in the obligatory character of compliance. Nor does the custom which

arises in this way need to be any less important or any less real than custom which entirely arises out of respect for the law [180–181].

This is not to deny the difference between complying with an already existing norm and behaving in such a way as to establish a custom. It is simply to point out that "political" motivations do not exclude that conduct, however opportunistic its basis, corresponds to a legal obligation. When a state follows a practice which is dictated by a rule to which that state does not explicitly adhere, it contributes to the consolidation of that rule into a generally obligatory norm. Only if that state had made it unambiguously clear that despite its conduct it persists in refusing to be bound by the rule would the "political" character of the motives become legally pertinent.

One important factor which has contributed to the formation and consolidation of the customary norm is the slow but continuous increase over the years in the number of states which have ratified or acceded to the Geneva Protocol. Today this convention binds almost all militarily and politically important states, and while there are still a considerable number of former colonies and protectorates whose relation to the Protocol is not altogether clear, very few states indeed are positively known to be non-adherents.

Even more important is the extremely limited character of those violations of the CBW prohibition which are alleged to have taken place, and the fact that in such cases both the accused party and other states have generally voiced their belief that the use of CB weapons is illegal.[6] It appears that since World War I no state has ever expressed the opinion that it could legally initiate the use of CBW, and the opposite conviction has often been stated, even by states which were *not* parties to the Geneva Protocol. Most important in this respect is the virtually unanimous resolution which the General Assembly of the United Nations passed in 1966 and reiterated in 1968, 1969, 1970 and 1971.

Practice and belief

During World War I, when the first large-scale use of chemical weapons occurred, there was already a widespread belief that such use was contrary to the law of war. This is indicated by the fact that both sides sought to justify their actions by claiming that they were using gas in reprisal. As

[6] The case of Italy's CW attacks on Ethiopia may seem to be an exception. Italy maintained that it had a right to use chemical weapons in *reprisal* for violations of rules of the law of war other than the CBW prohibition itself. Implicitly, therefore, Italy recognized the illegal character of CBW.

noted, representatives of the military authorities of the United States, Belgium, Great Britain, France, Italy and Portugal had declared in 1918 that in their opinion the use of poisonous and asphyxiating gases fell under the provisions prohibiting the use of poison and of arms, projectiles or means of war calculated to cause superfluous injury [182].

Similar views of the illegality, not only of the use of poison (as is sometimes claimed) but also of CW in the modern sense, had prevailed even before the Hague Conventions of 1899 and 1907. In 1846 a British Government committee rejected a proposal by Admiral Cochrane to use sulphur dioxide to flush out troops from fortified places, saying that this would not be in keeping with the rules of warfare [183]. A proposal to use shells containing cacodyl cyanide against Russian naval vessels during the Crimean War was opposed by the British War Department on the grounds that it would be comparable to poisoning the enemy's water supply [184]. Again, the idea of CW emerged from many quarters during the American Civil War. General Grant is reported to have opposed one such scheme because "such a terrific agency for destroying human life should not be permitted to come into use by the civilised nations of the world" [185].

The wording of the post-World War I treaties reflected this belief that CW in the modern sense was already illegal. The Versailles Treaty referred to chemical weapons ("asphyxiating, poisonous or other gases and all analogous liquids, materials or devices") as "being prohibited". The Treaty of Washington (and, following it, the Geneva Protocol) referred to the same weapons as "having been justly condemned" by the civilized world and to their prohibition as "having been declared" in previous treaties. The 1923 Convention for the Limitation of Armaments of Central American States recorded the view of the contracting parties that the use of chemical weapons in warfare "is contrary" to humanitarian principles and to international law.

As shown in detail in a recent study by Blix [186], several delegates at the conference which drew up the Geneva Protocol and at the League of Nations Disarmament Conference in 1932–1933 were of the opinion that they were confirming and codifying an existing prohibition rather than formulating a new norm. In proposing a prohibition on the export of chemical weapons of war, the United States seems to have taken the view that the *use* of these means was already prohibited. The Japanese delegation which supported the US proposal considered that "such prohibition necessarily implies the formal recognition that the prohibition to use [chemical and biological weapons] constituted an integral part of International Law" [187]. The Swiss delegate unequivocally held that chemical and biological warfare was prohibited by international law and proposed

the adoption of a convention to codify this principle. He emphasized that this was no new international undertaking, but that a codification would constitute an additional guarantee. This view was endorsed by the delegations of the Netherlands and of Colombia. Although the view that the prohibition was part of international customary law was not shared by all the delegates to the conference, Blix rightly concludes from his survey that "it is impossible to read the proceedings which led to the adoption of the 1925 Protocol without gaining the impression that the majority of delegates felt they were largely *confirming* an existing prohibition, formulated most lately in the Washington Treaty". [188]

The extra-contractual character of the CBW prohibition was discussed again at the League of Nations Disarmament Conference in 1932–1933. One of the problems considered was the elimination of preparations for CW. To achieve this it would be necessary to abrogate both the condition of reciprocity contained in the Geneva Protocol (its character of applying only *inter partes*) and the right to use CB weapons in reprisals against violators.[7] This in turn raised the issue of whether a ban not subject to reciprocity was to be based on universal adherence to the proposed disarmament convention or on the assumption that the prohibition of use of CB weapons was already binding upon all. Again, the Swiss delegate was most explicit in his affirmation that the prohibition applied even to those states which did not accede to the Convention. He was supported in this by the French and Belgian delegates. The rapporteur must also have had an extra-contractual prohibition in mind when he referred to sanctions which could be applied "both to signatory and non-signatory States" guilty of violating it. The British and French delegates, as well as the chairman, spoke of violations of the prohibition as an "international crime" [189].

As in 1925, the belief in the universally binding character of the CBW prohibition was not shared by all. One delegate referred to the prohibition of CBW and to measures dealing with infringement as being "not recognised principles of international law, but rules of conventional jurisprudence", and thought that "it was going too far to say that these rules should be obligatory in themselves" [190]. The position of the US representative was not altogether clear, though at one stage he spoke of the prohibition as "affirming a *new* principle of international law" (emphasis added).

Blix summarizes the situation in the following words:

> There was—already at this stage—a strong current of opinion to consider the prohibition of chemical and bacteriological weapons as *lex lata*, law valid for all, regardless of express adherence to the Geneva Protocol or other instruments.

[7] Cf. Volume IV, p. 162.

There was a readiness to accept the prohibition without making the obligation subject to reciprocity, but, instead to reserve the right of *reprisals* against any violators, whether they had expressly accepted the prohibition or not." [191]

In Volume I of this study, a considerable number of alleged cases of CW and BW are listed. The question therefore arises of their possible implications for the customary prohibition: Can it be maintained that these many cases, if they occurred, are evidence of a practice of states which runs counter to the assumption of a customary rule, and what consequences, if any, can be drawn from this series of allegations in regard to the belief by states that abstention from CBW constitutes a legal obligation?

To begin with it may be noticed that the effect of such allegations upon the law will not be uniformly negative. Some of the reported cases may have actually taken place but may nevertheless be so obviously exceptions to a practice of non-use, so universally condemned as violations of international law, and so vehemently denied by the presumptive perpetrator that the ultimate effect is to strengthen the law instead of weakening it, by emphasizing its acceptance by almost all states and its observance in almost all wars. Moreover, use of a given weapon on one occasion may effectively dispose of the argument that subsequent restraint was caused not by legal and moral inhibitions but by the undeveloped state of the weapon.[8] In themselves, isolated violations certainly do not prove the non-existence of a customary rule; only repeated violations in a substantial proportion of those cases in which use would have been militarily advantageous can do so.

Other allegations may have been fabricated or it may be that the events reported occurred but were unintended.[9] In such cases, the important factor to note is whether the reactions of the accused state and of world opinion in general is indicative of a belief in the illegality of the alleged act. The suspicion, or the conviction, that many allegations are slanders fabricated for propaganda reasons has often been voiced. As Greenspan notes, it is itself a significant commentary on the strength of extant legal convictions if such allegations are made, for "if gas warfare is a legal weapon of war, allegations of its use in combat could not in themselves bear a slanderous connotation" [192].

As regards the question of the existence of a practice consisting in the use of chemical weapons in war, two cases stand out as potentially having clear and definite legal implications: the use of lethal (and other) gases

[8] Alleged BW by Japan during World War II might be a case in point.
[9] For examples of the latter, cf. allegations of use of CW in the European theatre in World War II, Volume I, pp. 153–57.

by Italy against Ethiopia in 1935–36[10] and the use of irritant-agent weapons and herbicides in Indo-China,[11] principally by the United States. In neither case can it be doubted that repeated use of such means on a similar scale and under similar circumstances would bring the customary rule into serious jeopardy.

The attacks on Ethiopia, which must certainly be described as the use of poisonous gases, were (if only implicitly) admitted by the Italian Government. Both belligerents were parties to the Geneva Protocol, so that the public outcry and the official statements prompted by these violations cannot be taken as evidence of an extra-conventional prohibition. From the point of view of the Geneva Protocol, the gas attacks on Ethiopia constituted a violation, a war crime,[12] but in no way affected the imperative character of the prohibition. From the point of view of the customary norm, which is not only violated but also weakened by such practice, the most important point to note is that this case, seen in historical perspective, has been—and is generally recognized to have been—an outstanding exception. It has remained an outstanding exception despite the fact that numerous situations have since occurred, not least the many wars of colonial liberation, in which the applicability of the Geneva Protocol was not beyond doubt, because these wars could be construed as not international in character, in which the military temptations to use lethal chemicals were no different from those to which the Italians had succumbed but in which these weapons were nevertheless not used.[13] In retrospect, but only in retrospect, the Ethiopian case seems to be more indicative of the strength of the law than of its weakness.

As regards the use of the "milder" forms of chemical warfare in Viet-Nam, the situation is quite different. Whether this will also in due course turn out to have been an exception in the annals of war is anyone's guess. There is in fact a little-known precedent in the acknowledged use of irritant

[10] See Volume I, pp. 142–46.

[11] See Volume I, pp. 162–210.

[12] Unless one accepts Italy's claims to a right to conduct reprisals against crimes not falling under the Protocol (chapter 6, pp. 143–45 considers the legal status of such claims), and the reality of the alleged Ethiopian war crimes.

[13] The closest analogies are the use of poisonous gases by the Japanese in China, and, allegedly, by Egypt in the Yemen. Neither Japan nor the Yemen was party to the Geneva Protocol, so from a strictly formal point of view both cases fall outside its scope. The Chinese charges against Japan are discussed below. The Saudi Arabian allegations against Egypt were denied by the latter. The charges aroused public outcry but few official reactions, and the United Nations did not take action. In a release by the British Foreign Office, the use of poison gas by Egyptian armed forces was characterized as "a clear breach of generally accepted rules of conduct". The United States' position was that "the use of lethal gas [was] clearly contrary to international law". Cf. Volume IV, p. 246.

agents by the Japanese in China which the Japanese also claimed was not prohibited. The Geneva Protocol is not applicable to the Viet-Nam War since (at least) one of the belligerents is not a party to it, so the practices of the United States and the opinions of all states regarding the legality of these practices bear directly on the customary prohibition. Since the dispute in this case relates to whether the specific chemicals employed are prohibited, not to whether any prohibition applies, we postpone that discussion until the general treatment of the prohibitory scope of the customary prohibition.[14] However, it may be noted at this point that the United States has generally been careful not to use lethal chemicals or biological weapons in Viet-Nam and has recognized the illegal character of such use, as have indeed all other states. In this way the statements and behaviour of the United States in relation to CBW in Viet-Nam may be seen as an important *confirmation* of the binding character of a customary prohibition, albeit of a severely truncated one.

As for all the other allegations recorded, it can be stated that even if none of them could be dismissed as false, as a mistake, or as an act of insubordination in the military hierarchy, still they would not constitute substantial evidence for a practice of CB warfare. Almost all of these allegations relate to cases of a decidedly marginal character, both militarily and legally. In fact the record of non-use is much more impressive. There is no confirmed evidence of biological weapons having been used in recent times, at least not on a scale greater than that of sabotage or assassination. With the exception of the wars in Ethiopia, Yemen, China and Viet-Nam, and despite the fact that throughout the last half-century these weapons could easily have been (and in many cases were) produced by all major and medium powers, nonetheless chemical weapons have not been used, whether in confirmed or unconfirmed instances, as a means of warfare meant to have a significant military impact. In the light of the number and character of military conflicts in these fifty years, it can be concluded that the non-use of chemical weapons (possibly with the exception of irritant-agent weapons and herbicides) constitutes that practice which the existence of a customary rule requires.

The second aspect of the question is whether this practice is accompanied by a general conviction as to its obligatory character. For the states which are parties to the Geneva Protocol, such conviction seems to be implied by the wording of the Protocol itself: the condemnation of CW "by the general opinion of the civilized world" and the prohibition "binding alike the conscience and the practice of nations".

Detailed surveys of the declarations and policies of states in regard to

[14] See pp. 130 ff., below.

CBW can be found elsewhere.[15] Here we shall only deal with those factors which are most directly relevant to an assessment of whether there is, in positive law, a customary prohibition of CBW.

To establish the existence of a prohibition of CBW which binds states regardless of their adherence to the Geneva Protocol, the most important situations to consider as regards both the practice and the beliefs of states concern the use or alleged use of CB weapons in cases where one or several belligerents were not parties to the Protocol. This singles out cases involving the United States and Japan for special attention, and it also suggests the need to consider in greater detail the views expressed by those two states.[16]

As regards the *United States* the most notable fact is its consistent record of abstention from CB warfare throughout the period since World War I. This restraint has occurred despite the fact that the United States was bound by no contractual obligations and despite the fact that it has been a leading belligerent in three major wars and has engaged in armed hostilities, more or less officially, on several other occasions. Moreover, it is probably the case that throughout this period the United States has had the greatest potential for waging CBW and has been the least vulnerable to the CB weapons arsenals of other states. Disregarding at this point the question of irritant-agent and herbicide warfare in Viet-Nam, certainly the restraint of the United States has contributed significantly to the creation and consolidation of a custom of non-use of CB weapons in war, indeed has been a *sine qua non* condition of the emergence of this custom. Even were one to attach credibility to the allegations of BW during the Korean War, this case would assume only the character of a violation of minor military significance, wholly exceptional in the context of US wartime behaviour in the past half-century. It was vehemently denied by the United States itself in terms which suggest an implicit if not an explicit recognition of its illegal character. Even an acceptance of these allegations at face value could not alter the conclusion that the United States has behaved *as though there had been* a prohibition, also applicable to the United States, of using such CB agents as are lethal or seriously injurious to health. The *behaviour* of the United States certainly provides strong supporting evidence for the existence of an extra-contractual obligation to refrain from CBW.

[15] See Volumes I, II and IV, *passim*.

[16] One may add the Egyptian intervention in the Yemeni Civil War since the Yemen had not acceded to the Protocol. Formally, the Egyptian ratification of the Protocol did not oblige it to refrain from CBW against the Yemen. Japan only ratified the Protocol quite recently, so there is a long record of state practice and expressions of belief as to the legality of CBW emanating from Japan and relevant to the question of the customary rule.

The same cannot be said of official US *statements.* Considering the period as a whole, the overall impression is that ambiguity has been deliberately cultivated and that declarations have been carefully worded each time to avoid any commitment one way or the other. It is impossible to find any consistent pattern in successive US declarations apart from this apparently deliberate ambiguity, and whereas it has never been claimed officially that the United States could legally engage in CB warfare, an explicit, official acceptance of a customary rule is also not to be found until very recently.

The ambiguity in the position of the United States is a result of the long confrontation of two incompatible approaches to the law of war. In one approach there is an effort to limit the horrors of war by prohibiting certain means which are deemed more inhumane, more destructive, more dangerous or more odious than other weapons. This leads to the maximalist attitude to the laws of war which is adopted by most states and which has also on occasion been predominant in the United States, most notably in the first decade after World War I. In this period the United States made great efforts to secure international agreements to limit the means of warfare, particularly in the field of CBW.

The second approach, which is incompatible with the former, consists in keeping all available options open.[17] It is related to a conception which sees war less as a common calamity, and more as a means of aggression and defence against aggression. It is therefore connected with a conception of "just war": war, so the argument goes, is justified when, and only when it is a measure of self-defence (or of collective self-defence) against aggression; but once the enemy has committed aggression, any means which might effectively help to thwart it are deemed acceptable, and legal limitations regarding which types of weapons may and may not be used are perceived as mere hindrances to the rapid restoration of a just peace. Such hindrances are all the more deplorable since the aggressor state, which is, by assumption, already guilty of a breach of the peace, is not likely to observe the limitations imposed by the laws of war.

Given this perspective on war, the problem becomes only to avoid war, to eliminate it, rather than to cope with a particular war by legal means after it has started. If and when a relapse into the barbarism of war occurs, nothing must inhibit the realization of the moral principles of eliminating the use of force and its roots on the side of the aggressor [194].

[17] O'Brien makes essentially the same distinction between two approaches to the law of war whose continued opposition accounts for the ambivalence of US CBW policy. He describes these views as "idealist" and "realist" because in his view they reflect greater or lesser credulity as regards the strength of the laws of war when these are confronted with the requirements of military expediency [193].

Anything that can in any way strengthen the position of the aggressor and thereby weaken the claim of the attacked to restore a peaceful order must be avoided. The aggressor, by his act of aggression, has become an "outlaw". A legal distinction is introduced between aggressor and aggrieved [195], and in effect the universalist character of the law of war—the principle of the equality of belligerents—is denied. Evidently, this conception of just war leads to nothing less than the complete negation of all regulations on warfare, and it is not surprising that on the basis of this attitude the Geneva Protocol was characterised as "an obsolete paper pledge" or "paper promise" [196–197].

This view of the laws of war has occasionally been held by others,[18] and its conception of aggressor states is reflected in the United Nations Charter. It is nonetheless primarily a US conception. In opposing and refusing to sign the 1899 Hague Gas Declaration, one of the US delegates put it thus:

> I represent a people that is animated by a lively desire to make warfare humane but which nevertheless may find itself forced to wage war; therefore it is a question of not depriving itself through hastily adopted resolutions of means which it could later avail itself with good results. [198]

This was again the view which prevailed when, in May 1952, US Ambassador Cohen was defending his country against allegations of BW in Korea. He said:

> We must approach the problem of disarmament from the point of view of preventing war and not from the point of view of regulating the armaments to be used in war. . . . But we do not intend, before such measures and safeguards have been agreed upon, to invite aggression by . . . committing ourselves to would-be aggressors and Charter-breakers that we will not use certain weapons to suppress aggression. To do so in exchange for mere paper promises would be to give would-be aggressors their own choice of weapons. [199]

This conception of just war and its corollary, the minimalist attitude to the law of war, is tenable neither in theory nor in practice.[19] While it was well suited as a legal and intellectual basis for the strategic doctrine of massive retaliation prevailing in the 1950s, it clearly cannot be reconciled with the doctrine of flexible and limited response adopted since the beginning of the 1960s. This latter doctrine implies a willingness to live with "aggressive states" provided they can be coped with on a war-to-war basis: an adequate but limited response to an act of aggression makes little sense

[18] E.g. Norway in the 1920s (see Volume IV, p. 47).

[19] In a recent study Meyrowitz has shown how the great majority of authors have supported the principle of non-discrimination against the aggressor state [200]. See also the work of Krakau [201].

within the doctrine of just wars and in a context where only the minimum requirement of the law of war is recognized. On the contrary, it cogently presupposes the maximal recognition of the law of war.

But related to the abandonment of the doctrine of massive (nuclear) retaliation there was a growing interest in the diversification of the US weapons arsenal, its equipment with special-purpose weapons and its adaptation to a wide variety of contingencies. In the late 1950s and early 1960s therefore, one finds in the United States what amounts to a campaign to "sell" CB weapons to the public by presenting them as being at once militarily useful and morally commendable. Futuristic scenarios of "humane" warfare in which incapacitating agents are used to reduce casualties to a minimum were elaborated as part of this effort.[20] A report, drawn up by a civilian consultative committee as early as 1955, had praised the "unique potentialities" of biological, chemical and radiological weapons and had recommended that they be further developed and included in the arsenal and strategic planning of the United States. The committee recommendations, which were approved by US Secretary of the Army Brucker, envisaged that the Army Chemical Corps should launch a campaign to give the public a better understanding of the place CB weapons ought to have [202–203].

In the late fifties and early sixties, considerations of this sort led a number of US legal writers associated with the armed forces to deny the existence of a legal prohibition of CBW—at least as regards the United States—and to advocate a pragmatic case-by-case approach to the use of these weapons.[21]

While the doctrine of flexible and limited response presupposes a maximalist attitude to the law of war in general and a willingness to enter into "paper" agreements, it also creates the intellectual framework within which it seems necessary to possess a diversified arsenal. The development of special-purpose weapons such as irritant-agent weapons and herbicides intended for limited forms of warfare, and the attempt to legalize their use, thus become the direct result of a doctrine which seeks to exclude the use of weapons intended primarily for forms of warfare which are not subject to any limitations. Within the intellectual framework of this doctrine, a prohibitive attitude towards "heavy" forms of CBW logically implies a permissive attitude towards "lighter" forms. In the US attitude to CBW, therefore, one finds not only the contradiction between the maximalist and the minimalist view, but also the contradiction between a prohibitory attitude towards the most injurious weapons and an active advocacy of per-

[20] See Volume V, appendix 1.
[21] See p. 128.

missiveness in regard to weapons which (at least in their direct effects) are less injurious. This differentiation within the spectrum of possible CB weapons is logical, although by no means necessary, within the doctrine of limited but adequate response to aggression, but is contradictory from the point of view of the laws of war.[22] This contradiction lies at the root of the inconsistencies, half-measures and internal disputes of the United States in the last few years. The real confrontation, therefore, has to do with the relative salience of military and arms control considerations, and, given current military doctrine, this leads to a confrontation not over the existence of a prohibition (as it did previously), but over its scope.

Throughout the period from World War I and until 1926, when the Senate refused to ratify the Geneva Protocol, the attitude of the United States had been quite unambiguous. It is no exaggeration to say that the United States was the main driving force behind the efforts to outlaw CB warfare. It had signed the Treaty of Versailles and ratified the treaty with Germany of 25 August 1921 which refers back to the text of Article 171 of the Treaty of Versailles. The United States proposed the clause on chemical weapons in the Treaty of Washington. The United States ratified that treaty in 1923, and when the treaty did not enter into force—for reasons related neither to the United States nor to chemical weapons—it was again the United States which, at the Conference for the Supervision of the International Trade in Arms and Ammunition and in Implements of War, insisted on including the question of the trade in combat gases (and subsequently of a total ban on their use) among the topics dealt with by the conference. The US delegation saw to it that the Geneva Protocol was drawn up and adopted, despite the view which had initially prevailed among the majority of delegates that this issue should have been dealt with at a separate conference. Again on a US initiative, on 5 May 1923, the Fifth International Conference of American States adopted a resolution recommending a convention similar in contents to the Washington Treaty [204].

Even after opposition to the Geneva Protocol had developed in the Senate and the question of its ratification had been shelved, the US Administration continued to support the efforts at the League of Nations Disarmament Conference to expand the prohibition of CB warfare and of CB weapons beyond the provisions of the Protocol. At this time, however, the minimalist attitude described above was already gaining ground. In 1934 a joint Army-Navy memorandum stated:

[22] As shown at length in Volume V, chapter 1, a legal norm which sought to accommodate these contradictory approaches to weapons at opposite ends of the CB weapons spectrum would be weak and vulnerable.

"The United States will make all necessary preparations for the use of chemical warfare from the outbreak of war. The use of chemical warfare, including the use of toxic agents, from the inception of hostilities, is authorized, subject to such restrictions or prohibitions as may be contained in any duly ratified international convention or conventions, which at that time may be binding upon the United States and the enemy's state or states. [205]

The United States did not engage in chemical warfare during World War II, despite the fact that it might have been advantageous to do so, at least during the Pacific war. This is not to claim that respect for the law was necessarily the principal cause for that restraint; lack of material preparedness was another restraining factor, related, of course, to previous low expectations that these weapons would be used, not least because of their status of prohibited weapons. In any case, the use of chemical weapons would have entailed political liabilities so soon after President Roosevelt's solemn declaration that the United States would not be the first to engage in CB warfare.

In Korea, the United States again refrained from using chemical weapons, although it is probable that they could have been used effectively. Field commanders reportedly made occasional requests for permission to use chemical weapons [206–207]. Allegations of BW in Korea were vigorously denied.[23]

The US position during World War II was that it would refrain from first use but would retaliate in kind if CB weapons were first used by its enemies. While the moral restraints—standards of civilized conduct—were explicitly referred to, government spokesmen seem to have been careful to avoid any suggestion that these moral norms had the character of a legal obligation. It is reported that when the State Department proposed a declaration that the United States would comply with the Geneva Protocol if other states (meaning Japan) did likewise, Secretary of War Stimson opposed this form of indirect acceptance of the Protocol by declaration [208].

In his well-known declaration of 1943, US President Roosevelt referred to reports that Axis powers were contemplating the use of "poisonous or noxious gases or other inhumane devices of warfare". He described the use of such weapons as "outlawed by the general opinion of civilized mankind" and as a "crime". Nonetheless the restraint he promised was presented as resulting not from a legal obligation, but from a mere policy decision: "I hope that we never will be compelled to use [these weapons]. I state categorically that we shall under no circumstances resort to the use of such weapons unless they are first used by our enemies." [209]

[23] See Volume V, appendix 4 (III); and Volume IV, chapter 7.

This tendency to present US restraint in the field of CBW as a matter of policy, a decision which could be revoked at will and which did not result from a legal obligation towards other states, has been evident until quite recently. Replying in March 1965 on behalf of the President to an enquiry by a number of Congressmen, Deputy Secretary of Defense Cyrus Vance stated that:

While national policy does proscribe the first use of lethal gas by American forces, there is not and never has been, a national policy against the use of riot control agents. [. . . Their use] in South Vietnam in no sense constitutes a change in policy from that previously enunciated by Presidents Roosevelt and Eisenhower. [210]

Disagreements between the different departments apparently remained even after the unequivocal acceptance by the United States in 1966 of a customary law obligation to refrain from CBW. In February of the following year, speaking of agents other than "riot-control agents" and herbicides, Cyrus Vance stated before a Senate subcommittee:

We have consistently continued our *de facto* limitations on the use of chemical and biological weapons. . . . It is against our policy to initiate their use. [211]

At the same hearings he referred to "our policy not to initiate the use of lethal chemicals or lethal biologicals".[24] [212]

In 1959, following several indications that the US Army might be seeking a change in the policy of not using CB weapons except for retaliation in kind[25] [213], Congressman Robert Kastenmeier introduced a draft House Concurrent Resolution to reaffirm

the longstanding policy of the United States . . . under no circumstances [to] resort to the use of biological weapons or the use of poisonous or obnoxious gases unless they are first used by our enemies. [214]

This resolution was very limited in its wording. It could be read as relating only to severely injurious chemicals and it spoke of a "policy", nothing more. It was nonetheless oposed by both the Department of State and the Department of Defense. The latter considered that

similar declarations might apply with equal pertinency across the entire weapons spectrum, and no reason is perceived why biological and chemical weapons should be singled out for this special declaration. [215]

The State Department argued:

[24] Note the change from "poisonous or noxious" substances in Roosevelt's 1943 declaration to "lethal" substances in these recent paraphrases. Note also the ambiguity of both expressions.

[25] See also Volume II.

As a member of the United Nations, the United States, as are all other members, is committed to refrain from the use, not only of biological and chemical weapons, but the use of force of any kind in a manner contrary to that of the organisation's charter. . . . Of course [US responsibilities involve] the maintenance of an adequate defensive posture across the entire weapons spectrum, which will allow us to defend against acts of aggression in such a manner as the President may direct. [216]

This subsumption of restraints on the use of CB weapons under the general prohibition of the use of force has been used on other occasions by the State Department.[26] It amounts to a total denial of the laws of war, customary or conventional. It does so because it ignores the fact that once force has been resorted to, the legitimacy of the means used must be considered *independently* of the position of a belligerent under the Charter's prohibition of recourse to force. The statement is nonsensical from a legal point of view. Its political virtue lies in its ambiguity. It might be taken to mean that the United States is committed (*a*) not to use CB weapons *and* (*b*) not to use force contrary to the UN Charter; but it can *also* be taken to mean that CB weapons are in the same category as all other means of war and their use permitted in all cases when the use of force is legitimate under the UN Charter. [218]

The US position as regards the CBW prohibition can therefore best be summarized by distinguishing several periods. Between the two World Wars, active efforts were made to support and to strengthen such a prohibition. During World War II, when the United States was still not a party to the Protocol, there developed a reluctance to acknowledge a legal obligation of an extra-contractual kind. In the late fifties and early sixties, while interest in new CW agents was increasing in some sections of the armed forces, groups within the United States became actively involved in efforts to minimize in the public eye the scope of existing prohibitions and their implications for the forms of warfare in which the United States was entitled—or so it was thought—to engage. Throughout this period the United States abided by rules which, however, it was careful not to declare itself bound by.

Whatever official statements proclaimed, it was increasingly clear that the *de facto* observance of the prohibition by the United States was not a "policy" which could be changed at will. A long period of *de facto* restraint, and of reference to the morally outrageous character of CB war-

[26] For example on the occasion of the Korean BW allegations in 1952 Ambassador Cohen had stated: "The United States as a member of the United Nations has committed itself, as have all other members, to refrain from not only the use of poisonous gas and the use of germ warfare but the use of force of any kind contrary to the law of the Charter" [217].

fare, made this impossible. The freedom of action the United States sought to preserve by refusing to acknowledge a legal obligation was becoming more and more an illusion.

It may be noted that the reserve of the United States in regard to the Geneva Protocol and its development into a customary rule, as well as its reluctance to accept, if not the authentic character of the extensive interpretation of these prohibitions, at least their character of generally accepted interpretations which had gained the status of an interpretation imposed by custom, does not correspond to the general US attitude towards treaties which have developed into customary law as a result of the large number of accessions and the length of time they have been in force. In other cases the United States has not been reluctant to recognize the emergence of international customary law.[27]

Under mounting pressure over chemical warfare in Viet-Nam, an official US position as regards the use of CB weapons in war finally emerged in the latter half of the 1960s. It consists in accepting a customary law *obligation* to refrain from the rather vague categories of "gas" and "germ" warfare, while at the same time maintaining that the use of "riot-control agents" and herbicides is not prohibited, whether under customary law or under the Geneva Protocol.[28] This partial clarification was a defeat for those who had advocated a minimalist approach to the laws of war in the field of CBW, but within the context of the doctrine of flexible and limited response the position which emerged represented a total victory of considerations of military expediency over those of the control of armaments and of their use. On the other hand this position is not likely to prove final. As argued above and in Volume V, the present US position is inherently unstable. In any case decisions are pending—not least those which relate to the ratification of the Geneva Protocol and the reservations and interpretations which may accompany it—which may open all of these issues again.

Japan made extensive use of chemical irritants in the war against China.

[27] In 1958, for instance, the Department of State declared of the then existing treaties on international waters: "The number of states parties to these treaties, their spread over both time and geography, and the fact that in these treaties similar problems are resolved in similar ways, make of these treaties persuasive evidence of law-creating international customs" [219].

[28] This took the form of an unconditional renunciation of use and possession of biological weapons and of a reiteration of the US declaration that it will never be the first to use lethal or incapacitating chemical weapons (Presidential statement of 25 November 1969, reproduced in Volume V, appendix 6.D). Toxins were renounced unconditionally in the President's policy decision released on 14 February 1970 (Volume V, appendix 6.E). The Administration's policy with respect to the use of herbicides and irritant-agent weapons is set forth in the State Department report which accompanied the Geneva Protocol when the latter was transmitted to the US Senate in August 1970 for advice and consent to ratification [220].

Officers interrogated after the war admitted to having used lachrymators and sternutators, but claimed that in the Japanese view these were not prohibited by international law, because they caused neither death nor permanent injury.[29] This is similar to US claims regarding the warfare in Viet-Nam and involves the same two elements: a *narrow interpretation* of the prohibition in international law, and at the same time an *implicit admission* of a legal obligation not to use more injurious weapons.

The Chinese (and outside observers) claimed that Japan also used "poisonous gases" and, from 1940 to 1944, biological weapons against them. The evidence suggests that these weapons may in fact have been used, at least on an experimental scale. Japan was also accused of using biological weapons against the Soviet Union and the Mongolian People's Republic. In a resolution following the Chinese complaints, the Council of the League of Nations recalled that "the use of toxic gases is a method of war condemned by international law" [221]. The Assembly subsequently adopted a resolution which reaffirmed "that the use of chemical or bacteriological methods in the conduct of war is contrary to international law" [222]. Neither body made any reference to the Geneva Protocol (or to any other convention), thus affirming—at least implicitly—their belief in the existence of a wider prohibition. It is also noteworthy that, although the Chinese complaints concerned "poison gas", the Council and the Assembly do not seem to have believed that the prohibition was restricted thereto.

The indictment before the Tokyo War Crimes Tribunal included the charge:

> Employing poison, contrary to the international Declaration respecting Asphyxiating Gases, signed by (*inter alia*) Japan and China at The Hague on the 29th of July 1899, and to Article 23 (a) of the said Annex to the said Hague Convention, and to Article 171 of the Treaty of Versailles. In the wars of Japan against the Republic of China, poison gas was used. This allegation is confined to that country. [223]

This charge was never discussed and was not mentioned in the final judgement. It does *not* directly refer to a universally valid norm. Nevertheless it amounts to affirming such a norm, since the Hague Conventions are generally recognized to have become rules of customary law, and since the reference to Article 171 of the Treaty of Versailles must be to its characterization of poisonous gases as "being prohibited".

To emphasize: the Tokyo War Crimes Tribunal did not share the view of some contemporary authors that the Hague Conventions are inapplicable to post-1899 or 1907 forms of chemical warfare.[30]

[29] See Volume I, pp. 147–52.
[30] See pp. 94–95.

In 1944 the Japanese are said to have communicated to the United States their denial of having used gas "during the present conflict" and their willingness "to forego future use on [the] supposition that troops of [the] United Nations also abstain from using it" [224]. This seems to have been based partly on a recognition of a legal obligation [225], but mainly on considerations of military expediency.[31]

Evidence for an obligation binding upon Japan—or rather, evidence that the Soviet Union and other states consider Japan as bound by a CBW prohibition other than the Geneva Protocol—might seem to be provided by the trial of Japanese servicemen at the Soviet military tribunal in Khabarovsk in 1949. The defendants were charged with having engaged in biological warfare against the Mongolian People's Republic. They were convicted and therefore, so it is argued, the tribunal must have assumed that the prohibition of biological warfare applied to all nations irrespective of treaty obligations.[32] In fact the tribunal based its indictment on an act of domestic legislation.

In 1963, in the case of *Shimoda vs. State,* a Japanese court stated, by way of *dicta,* that the use of poison gas and bacteria in war violated international law [227].

Japan supported the 1966 UN resolution calling for "strict observance by all States of the principles and objectives of the [Geneva] Protocol", thus affirming its belief in the existence of a customary prohibition. On the occasion of the 1969 resolution affirming the absolutely comprehensive character of the CBW prohibitions, Japan abstained from voting. It was not then a party to the Geneva Protocol. On the other hand, Japan had (long before its ratification of the Protocol) given explicit support to the British memorandum of 1930 which defended the broad interpretation. Japan did not attach any reservation to its ratification of the Protocol in May 1970.

To summarize this discussion of the practice and beliefs of states as they relate to the existence of a customary prohibition of CBW, the following points may be noted:

First, there have been a few important cases in which these weapons have been used and, if all allegations are assumed to have been well-founded—certainly a very extreme assumption—there have been, in addition a considerable number of (militarily speaking) quite minor cases of CB warfare. Nonetheless, as the reactions of the international community have shown, these allegations were either disbelieved or they were seen

[31] See Volume I, pp. 326–28.

[32] Fuller notes that "a court, acting in an international capacity, has so interpreted the law, and there have been no protests of its action" [226].

as violations of an existing rule—violations which, far from abrogating that rule, served to reaffirm its imperative character. Considered in retrospect, there can be no doubt that since World War I, CB weapons employment in war has been wholly exceptional and does not contradict the affirmation of a general practice of non-use.

Second, the only two major military powers which were not parties to the Geneva Protocol throughout most of the interval since 1925, the United States and Japan, have affirmed on several occasions or have otherwise implied that the prohibition of CBW is applicable to them, too. International governmental organizations have similarly affirmed or implied that in the view of their members the prohibition of CBW is binding on states regardless of contractual obligations.

Third, there has been a gradual but consistent change in opinion from the inter-war period, when there was a widespread but not universal belief that custom prohibited CBW, to the present when there is a universal legal conviction to that effect. This point is important in another way. In the inter-war years the Hague Conventions were generally admitted to have the character of customary law. To the extent, therefore, that the acceptance of a customary prohibition of CBW is a more recent phenomenon, there is an indication that the treaty—if any—which corresponds to that custom is the Geneva Protocol, rather than the Hague Conventions. This already indicates the plausible character of the assumption that the Geneva Protocol and the customary rule are co-extensive.

The 1966 General Assembly resolution

The most clearcut evidence of the belief of states regarding the existence of a general customary norm is resolution 2162 B (XXI), adopted by the UN General Assembly on 5 December 1966.[33] This resolution calls upon all states regardless of adherence to the Geneva Protocol to observe strictly the principles and objectives of that convention, and condemns all actions contrary to its objectives.

As has been noted,[34] the first draft for this resolution was submitted by Hungary. It had been prompted by the use of irritant-agent weapons and herbicides in Viet-Nam and it expressed the view held by Hungary and other states that the use of these weapons constituted a violation of international law. In the course of the amendment procedure, however, all references to the legality or otherwise of the use of irritant-agent and herbicide weapons in war were deleted and the final text simply referred to the prohibited weapons by reproducing the title of the 1925 Protocol.

[33] See appendix 3.
[34] See p. 55 above.

In contrast, the other main feature of the Hungarian draft resolution was not affected by the amendments, namely the claim that *all* states were obliged to comply with the "principles and norms" of the Geneva Protocol. Precisely because the resolution in its final form addressed itself to that one issue only, and left unsettled the question of the interpretation of the Protocol, was it able to gain such widespread support. Ninety-one states, including the United States and Japan (which at that time had not acceded to the Protocol), voted in favour: four states (Albania, Cuba, France and Gabon) abstained; and none opposed the resolution [228]. As we shall see, the massive vote for this resolution expresses the recognition and the acceptance that the legal obligation embodied in the Protocol is binding, not only on the parties *qua* contractual law, but *erga omnes, qua* general customary law.

The text of the resolution as finally adopted on 5 December 1966 is as follows:

The General Assembly,
Guided by the principles of the Charter of the United Nations and of international law,
Considering that weapons of mass destruction constitute a danger to all mankind and are incompatible with the accepted norms of civilization,
Affirming that the strict observance of the rules of international law on the conduct of warfare is in the interest of maintaining these standards of civilization,
Recalling that the Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare of 17 June 1925 has been signed and adopted and is recognised by many States,
Noting that the Conference of the Eighteen-Nation Committee on Disarmament has the task of seeking an agreement on the cessation of the development and production of chemical and bacteriological weapons and other weapons of mass destruction, and on the elimination of all such weapons from national arsenals, as called for in the draft proposals on general and complete disarmament now before the Conference,
1. *Calls for* strict observance by all States of the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare signed at Geneva on 17 June 1925, and condemns all actions contrary to those objectives;
2. *Invites* all States to accede to the Geneva Protocol of 17 June 1925. [229]

References to this resolution have been made on several later occasions and its operative parts have by now received virtually unanimous support. In a resolution adopted on 20 December 1968, by 107 votes to none with two abstentions, the UN General Assembly

6. Reiterates its call for strict observance by all States of the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating,

Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, and invites all States to accede to that Protocol. [230]

This was reaffirmed in almost identical words in Resolution 2603 B (XXIV) adopted on 16 December 1969 by the General Assembly, by a vote of 120 to none with one abstention [231]. Several subsequent resolutions have reiterated these points.[35]

The legal bearing of the 1966 resolution may at first seem to be weakened by an apparent contradiction: the first paragraph which "calls for strict observance by all States of the principles and objectives of the Protocol" implies that the obligations laid down in that Protocol are binding upon all states, whether parties to the Protocol or not, whereas the second paragraph, which "invites all States to accede to [that convention]" seems to imply that the states are only bound if they adhere formally to the Protocol. In fact, this merely results from the co-existence of two sources of law: convention and custom. When a custom and a recent conventional rule have the same object, it is normal for the states parties to the latter to try to persuade other states to show their acceptance by adhering to the convention because, as a source, the treaty is generally held to be preferable to custom. Obviously, this practice in no way affects the binding force of the custom.

Evidently, there is no contradiction in the simultaneous existence of a conventional rule and of a customary norm prohibiting the same weapons: either the conventional rule is declaratory of a pre-existing custom or the conventional rule, which in the first place was binding only upon the contracting states, has subsequently become a rule of customary law, as a result of the fact that states not parties to the convention have followed the prescribed conduct in the conviction that it amounted to an obligation. In the case of the Geneva Protocol, both of these situations apply: the conventional rule which initially applied to its signatories only has since become a rule of customary law: then, in order to make manifest their acceptance of the rule, the states which are not yet parties to the convention accede to it. The convention then becomes declaratory of customary law. This is precisely the meaning of the second paragraph in the resolution, inviting all states which have not yet done so to ratify the Protocol.

Therefore, an interpretation of the resolution based on the second paragraph which, ignoring the first paragraph of that text, would maintain that a state is not bound by the prohibitions mentioned in the first para-

[35] UN General Assembly resolutions 2662 (XXV), 2677 (XXV), 2827 A (XXVI) (see appendix 3) and 2852 and 2853 (XXVI) [232].

graph unless it actually adheres to the Protocol, is untenable.[36] It would presuppose that the government of the state had authorized its representative to vote for the resolution in the firm conviction that its formal and solemn recognition of the *universal* character of the prohibitions contained therein is of no consequence as long as it does not ratify the Protocol, and that this recognition cannot be held against it. It presupposes an extreme bad faith on the part of that state.

As is well-known, a resolution of the UN General Assembly cannot, in itself, establish an obligation to respect the principles and aims of the Geneva Protocol or of any other norm.[37] At best,

> a resolution creates some legal obligation which, however rudimentary, elastic and imperfect, is nevertheless a legal obligation and constitutes a measure of supervision. The State in question, while not bound to accept the recommendation, is bound to give it due consideration in good faith. [236]

To consider the importance of the resolution from the point of view of whatever obligation there may be to comply with it[38] is, however, to miss the point, for *the imperative character of the customary rule which the resolution enunciates does not result from the resolution but from that rule itself.* The resolution only demonstrates that the psychological element of the customary norm is indeed present: that there is a legal conviction shared by almost all states that the Geneva Protocol is declaratory of a general rule which no state is entitled to disregard.[39] As any other act relative to a custom, the resolution both contributes towards *constituting* the custom (creating it, consolidating or confirming it) and towards *demonstrating* its existence.[40] The resolution is the *confirmation* or the *proof* of the acceptance of that rule by almost all states, but it is not the acceptance itself since most states accepted the rule prior to 5 December 1966.[41]

[36] Baxter, in an early paper, seems to argue in this direction [233].

[37] On the power of the UN General Assembly to create rules of law binding upon the member states, whether or not they voted for the resolution in which the rule was formulated, see the studies by Verdross [234] and Castañeda [235] and the literature cited therein.

[38] As Baxter seems to do [237].

[39] It is true that on a subsequent occasion—on 16 December 1969—the UN General Assembly had before it a proposal for a resolution which explicitly recognized "that the Geneva Protocol embodies the generally recognized rules of international law" [238] and that this resolution, although adopted, received no less than 36 abstentions and three dissenting votes. That resolution, however, made several other assertions of a much more controversial nature, including a broad definition of the prohibited weapons. The most that can be concluded from this vote is therefore that those 80 states which supported the resolution also endorsed its explicit reference to an extra-contractual obligation.

[40] Cf. Frowein: "The resolution ... can only be understood when one assumes that the General Assembly holds the content of the Geneva Protocol to be part of general international law [239]. See to the same effect, Bunn [240] and Blix [241].

[41] "The ultimate foundation of the obligatory character of rules and principles which

In the case with which we are concerned, the problem is in fact quite limited. Since 5 December 1966, the question is no longer whether the custom constitutes an obligation for those states which have not made their position clear or which may have expressed their dissent, but only to what extent it is an obligation for those states which have *demonstrated their acceptance of the rule* by voting for the resolution but which have not acceded to the Protocol.

A positive vote for this resolution cannot be dismissed as merely a wish, pious but inconsequential: it followed a tight discussion and negotiation on the wording of the resolution and it expressed the *formal adherence* to the *legal rule* designated by the expression "principles and objectives of the [Geneva] Protocol". It constitutes the *submission* to this rule; and the *condemnation* of "all actions contrary to those objectives" expressed at the end of the first paragraph is not a vague moral or political disapproval—it is, precisely, the "condemnation", in other words the sanction, relating to the *violation of a rule of international law*. It follows that if a state such as, for instance, the United States, which voted for the resolution although it is not a party to the Geneva Protocol, committed an act contrary to these "objectives", this violation would—legally—result in the usual sanctions of the law of war: reprisals, international responsibility of the state, and individual penal responsibility of the rulers and military commanders who have issued orders for the violation.

Different modes of formation and of creating obligations correspond to the two sources of international law regulating the use of biological and chemical weapons: custom and convention. For the conventional rule the obligation is subject to the procedure of ratification, accession or other form of written consent, and a vote for the second paragraph of resolution 2162 B (XXI) creates no obligations.[42] The domestic authority which is constitutionally qualified to ratify treaties retains its full sovereignty. But so far as the first paragraph is concerned, a vote for the resolution generates an immediate effect which is not conditional upon the fate of the second paragraph. It confirms the acceptance by the voting state of the legal norm which is the object of that paragraph, a norm which is specified by reference to the Geneva Protocol (which shows its character of

are 'declared', 'recognized' or 'confirmed' by a resolution [of the UN General Assembly], finally resides in the fact that they *are* customary rules or general principles of law" [242].

[42] It is not normally assumed that a government signing a treaty has *ipso facto* an obligation to submit it for ratification to the domestic authorities qualified to do so. It is certainly not possible to affirm that there is a *legal* obligation for the government of a state which is not a party to the Protocol but which voted for the resolution to submit the Protocol for ratification.

a legal rule) but which is *independent of that treaty*—as is shown by the reference to the principles and objectives rather than to the letter of that Protocol. The vote for the first paragraph constitutes a perfect international act which engages the voting states without need for a formal ratification.[43] One characteristic aspect of a custom is precisely that it by-passes the ratification procedure by the competent bodies of the states concerned.

The United States representative, explaining the US vote, made it perfectly clear that he was well aware of the implications of his government's support for the resolution.

> What we can do here today, however, if we are genuinely concerned over the dangers of chemical and bacteriological warfare, if we are anxious to maintain international law and the standards of civilized conduct, is to obtain from every country represented in this room, whether or not a party to the Geneva Protocol, formal public expression of intent to observe strictly the objectives and the principles of the Geneva Protocol. [243]

He described the resolution as a firm and positive engagement which should reflect in an authoritative manner the opinion of the UN organization as a whole. [244] A similar position was taken a year later by Assistant Secretary of State William B. Macomber, who wrote that the "basic rule" of the Protocol "has been so widely accepted over a long period of time that it is now considered to form part of the customary international law". [245] In 1967 the US Ambassador to the United Nations, basing himself on the vote for the above-mentioned resolution, concluded that

> The United States position on this matter [poison gas] is quite clear and corresponds to the stated policy of almost all other governments throughout the world ... The use of poison gases is clearly contrary to international law. [246]

It follows that there is no longer any possible retreat. If the United States, after having expressly condemned violations of the principles and aims of the Geneva Protocol by agreeing to the resolution, were to change its so-called "policy" of "non-first-use", this would constitute a violation of the law, irrespective of whether it had by then acceded to the Geneva Protocol. Customary law, as was noted, applies despite the contrary wishes of individual states, even the most powerful.

In other words, the "policy decision" of the US President, announced on 25 November 1969, to renounce the first use of lethal and incapacitating chemical agents and of all methods of biological warfare is not a "policy"

[43] The resolution also affects the states which are already parties to the Protocol since the customary rule also applies to them. As we have seen, the existence of the custom modifies the meaning of the reservations expressed by some of these states and, furthermore, it implies that if they were to end that treaty they would still be subject to those among its prohibitions which are common to the convention and the customary rule.

but a legal obligation. Even if it wished to, the United States could not retract those "decisions" without coming into conflict with international law, and the USA was bound by their stipulations even before they were announced.[44]

In summary, the resolution of 5 December 1966 shows in a particularly explicit way that the psychological element of the customary rule prohibiting the use of CB weapons is in fact present. There is an international practice consisting in the non-use of these weapons.[45] This practice corresponds to an international norm which, for a large number of states, takes the form of a treaty: the Geneva Protocol. An overwhelming majority of all states have explicitly recognized that the "principles and objectives" of the Protocol constitute an obligatory rule binding upon them irrespective of their participation or non-participation in the convention. Thus the elements constituting a custom are all present: an international practice, an international legal norm (in this case both conventional and extra-conventional), the agreement between the practice and the norm, and the virtually universal conviction of states that the norm constitutes an obligation for all states.

The opinions of publicists

In addition to conventions, international custom and the general principles of law, Article 38 of the Statute of the International Court of Justice recognizes "the teachings of the most highly qualified publicists of the various nations" as a subsidiary means for the determination of the rules of law. In this role juristic opinion functions not as a *source* of international law but only as *evidence* of its current state.

It might therefore seem appropriate to conclude this discussion of the existence of a customary prohibition of CBW by a survey of the opinions of international lawyers on the subject. Such a survey would prove to be inconclusive, as there is a considerable diversity of opinion among authors. While the majority of international lawyers today concur with the conclusions reached here—that a customary prohibition of CBW is indeed part of

[44] The renunciation of the *possession* of biological weapons can, however, be construed as a policy inasmuch as the United States would, in the absence of a treaty obligation precluding it, be free to alter this policy on a subsequent occasion. For the text of the Presidential statement see Volume V, appendix 6, pp. 275–76. (After the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction enters into force—which presupposes its ratification by the United States—that option is of course no longer available, save in those situations where withdrawal from the treaty is permitted under the provisions of its Article XIII.)

[45] Subject to the possible restrictions in the definition of chemical weapons discussed on pp. 130–140, below.

international law—there are nevertheless a number of authors who deny this prohibition in part or as a whole.[46]

Broadly speaking, the arguments adduced by those who deny the existence of the rule altogether fall in three categories:

The first of these arises from a basically positivist outlook on the law of war in general, a tendency to regard only treaty rules as relatively reliable, and a reluctance to accept the existence of customary law. It finds its most extreme version in the works of those US authors who consider it sufficient to note that the United States is not bound by a treaty prohibition of CB weapons. This view results from a fundamental underestimation of the importance of custom [248–249], "the oldest and in a logical sense the fundamental source of international law" [250], and especially of its central place within the law of war, of which, for a long time, it was the major constituent [251–252]. Indeed, the most important codifications of the law of war, the Hague Conventions of 1899 and 1907, were largely declaratory of pre-existing customary rules of warfare [253–254]. The judgment of the Nuremberg Tribunal noted that the rules embodied in the Hague Convention on Land Warfare, regardless of their acceptance by treaty, "were recognized by all civilized nations and were regarded as being declaratory of the laws and customs of war" [255]. It is evidently imperative to examine the problem of a customary law prohibition of a particular type of weapon on the basis of the criteria which define a rule of customary law according to the generally recognized theory. This is precisely what the proponents of the positivist objection fail to do or do only to an insufficient extent.

The second line of argument may be called pragmatist since it arises from the contention that, whether codified or not, a prohibition of the use of chemical or biological weapons will be respected only if the military incentives to use the weapons are weak. Given this view, according to which "military necessity" will always supersede respect for the law, non-use of CB weapons can always be explained away as resulting from lack of incentives; and if the argument is carried to its extreme one cannot, of course, speak of a practice of non-use based on a conviction of illegality. The fallacy in the argument arises first of all from a failure to recognize that, with the possible exception of extreme national emergency, incentives for and constraints against use are not merely military but are also political, and that for this reason military necessity itself is not unaffected by the existence of legal norms. In any case, to judge the *obligatory character* of a legal rule by its *effectiveness* is to leave the field of legal argument altogether. If it can be established that at some point in time there was a

[46] For a recent survey see the work of Thomas and Thomas [247].

general practice of non-use and that together with this practice there was a general conviction that use would have been illegal, that is enough. Then subsequent use, if it occurs—and unless it is of such scale, generality and duration that it amounts to the abrogation of the rule and its supercession by another rule—is not proof of the non-existence of a norm but of its violation.

The third line of argument is even further removed from pertinent legal reasoning. According to it, the fact that some powers produce and store chemical and biological weapons and prepare for their use in warfare is proof that, in the opinion of these powers, there is no legal norm prohibiting their use or, if there is one, that it is insufficient. This is the argument of Neinast [256]. It entirely overlooks the fact that CB weapons may be produced and stored with a view to their use for reprisals in kind.[47] It is also an argument with which one could "demonstrate" that since all states have police forces and courts, domestic laws do not exist or are inefficient. In fact the "inefficiency" as Neinast understands it, namely the possibility of transgression, is what distinguishes man-made laws from laws of nature.

In the early 1960s a number of articles appeared in US law journals purporting to show that the United States was not bound by any prohibition of biological warfare. Their authors, mostly lawyers associated with the US armed forces, sought to demonstrate that, irrespective of the customary prohibition of chemical warfare, the existence of which was not disputed (at least in so far as it applied to poisonous chemicals in the strong sense), and irrespective of treaty prohibitions of BW, there was no prohibition of biological warfare in customary law. The main argument related to the "newness" of biological weapons. It was maintained that there had been a "specific" practice or "custom" of regarding biological warfare as not being prohibited by any pre-1925 treaty provision or customary prohibition [257]. Evidence for this was sought in the formulation of the Geneva Protocol itself, its decision to "extend" the CW prohibition to BW. Thus "the Geneva Protocol was not declaratory of existing international law in 1925" [258]. Subsequent failure to use biological weapons could, so it was affirmed, constitute no evidence of an interest to have such means prohibited since "biological warfare in the present sense is simply too new for a pattern of practice to have developed" [259].

[47] The limitations governing the use of chemical weapons—and, even more so, of biological weapons—for purposes of reprisals in kind derive from norms of the law of war other than the Geneva Protocol and the customary rule (see below, p. 141). At most, therefore, the possession of these weapons indicates lack of respect for the former rules, not for the latter.

Each of these arguments rests on assumptions which are questionable, at the very least. At any rate, these arguments have little actuality today. For whatever was the case in 1925, the UN General Assembly resolution of 1966 shows conclusively that the Geneva Protocol, with its absolutely unambiguous wording in regard to biological weapons, is now declaratory of international customary law.

As regards the point at issue here—the question of the existence of a customary prohibition irrespective of its precise scope—one should not attach too much weight to the divergence of views found among international jurists. Compared with the evidence given in previous sections, the evidence provided by these works is of lesser importance, and this for several reasons.

First, many authors only deal with CB weapons in an incidental and cursory manner and do not seem to have had available the full range of evidence. This is of course not unique to those who question the existence of the custom. Many of those who recognize it merely state that this is so, and fail to establish that there is indeed both a general practice and a general legal conviction. Second, it has been noted that several of the arguments which purport to demonstrate the non-existence of a customary rule are unconvincing, and in a few cases plainly fallacious. Finally, but most importantly, the majority of the relevant texts appeared before the 1966 resolution of the UN General Assembly. This resolution, especially in the light of subsequent reaffirmations of its provisions and of the declarations of states in the intervening period, has been essential in affirming and consolidating the customary prohibition. Prior to 1966 the question of the existence of a customary rule was perhaps not beyond discussion, particularly in view of the fact that the psychological factor could not be conclusively proven to be present. But this is no longer so. It is therefore quite possible—indeed likely—that those authors who previously denied the existence of a custom would now view the matter differently. This is all the more likely as many of those who denied the custom, including Kunz [260], McDougal [261] and Stone [262], did so on the grounds that the United States had refused to associate itself with the Geneva Protocol.

By far the greater number of international lawyers nowadays recognize the existence of a customary prohibition of CBW. This is particularly so of those writing of a customary prohibition after 1966. There does not appear to be much disagreement with Bunn's rather conservative assessment that the support given to the UN resolution by non-parties to the Protocol provides "significant evidence of the existence of a customary rule. Added to the other evidence ... these actions strongly indicate a

customary rule banning the first use of poison gas and germ weapons in accordance with the principles of the Protocol." [263]

II. *Extent of the customary prohibition*

While the existence of a customary rule prohibiting the use of biological weapons and of (at least) the most injurious types of chemical weapons is no longer open to serious dispute, this is not the case as regards the precise coverage of that rule. The difference of opinion over the scope of the Geneva Protocol—the confrontation between the extensive and restrictive interpretations—is also found in relation to the customary rule. Specifically, the object of contention is the status of irritant-agent weapons and herbicides under this prohibition. But whereas the authentic character of the extensive interpretation of the Protocol can be established beyond reasonable doubt, the situation is less clear-cut as regards the scope of the customary rule.

It was noted previously that when a conventional and a customary rule having the same object exist side by side, it cannot simply be assumed that they also have the same content. The precise coverage of each must be determined separately by considering the constitutive elements of that rule. In the case of the customary rule the evidence which was surveyed in Chapter 3, and which told unambiguously in favour of the extensive interpretation of the Protocol, is either inapplicable or does not have the same relevance. The problem is no longer to interpret a treaty but to determine the composition, evaluate the importance and specify the significance of the various elements—material and psychological—which have contributed to the formation of the customary rule.

It is nevertheless useful to reconsider briefly the main elements of the demonstration regarding the Geneva Protocol. These consisted of a close-reading of the text of the Protocol, of a survey of post-1925 interpretative acts and declarations by governments, of the 1969 UN General Assembly resolution 2603 A (XXIV) which affirmed the all-inclusive character of the prohibition, and finally, of the fact that those states (*in casu* the United States) which are not parties to a treaty are also not qualified to interpret it.

The first of these, the close-reading of the definition of CW contained in the treaty text, is of course not directly pertinent to the interpretation of the customary rule. It is only relevant in an indirect way: the text of the Protocol itself suggests that the CW prohibition it enunciates was a reaffirmation and codification of a pre-existing rule.[48] But as has been

[48] In the treaty the BW prohibition, on the other hand, appears as a *new* rule, but that is of no importance in the present context.

shown, there was not (at least, not until quite recently) any doubt among the parties to that treaty about the comprehensiveness of the prohibition. For most of the parties to the Geneva Protocol, therefore, and they constitute the majority of states, the belief in the all-inclusive character of the customary rule follows from the text of the treaty itself.

It was also shown that official interpretative statements and acts after 1925 confirmed the view that both the drafters and, later, the parties to the Protocol held its CW prohibition to be all-inclusive. In a strict, formal sense states' attitudes towards the customary prohibition cannot be deduced from this. But in fact these declarations and acts are not as irrelevant as they may seem, for only from the point of view of strict doctrine is it justified to make such a sharp separation between the conventional and customary rules as has been done in this volume. When considering the beliefs of states about the scope of each rule, it becomes somewhat artificial. Mostly, the implicit assumption that states make the same clear-cut distinctions as jurists do, is unwarranted. The two rules are expressions of the same norm and, more often than not, interpretative statements and acts were not meant to apply to one of the rules only, but to the norm itself—in other words, to both rules. Throughout the period since 1925 there seems to have been general agreement that the two rules are co-extensive.[49] This was affirmed (as regards CW) in the Geneva Protocol itself, and was solemnly reiterated in 1966 in the form of a virtually unanimous vote for UN General Assembly resolution 2162 B (XXI). As a result, interpretative declarations and acts relative to the Geneva Protocol do provide substantial evidence, albeit of an indirect nature, on the psychological element of the customary rule: the beliefs of states about its scope. As was shown in Chapter 3, these have been overwhelmingly supportive of the extensive interpretation.

In passing resolution 2603 A (XXIV) in 1969, the UN General Assembly demonstrated, among other things, the belief of a large majority of member states that both the Protocol and the customary rule prohibited the use of all chemical methods of warfare. Only the United States and two other countries opposed the resolution. Thirty-five states, including many important ones, abstained.

In view of the considerable number of abstentions and of the presence of the United States among the opposing votes, the passing of this resolution does not have the same demonstrative force when considered as evidence for the broad interpretation of the customary rule, as it does in

[49] Note that the beliefs of states about the identity of the two rules do not prove that these rules *are* identical. Therefore these beliefs cannot be used to show that since the Geneva Protocol does not admit of any exceptions to the weapons prohibited, the customary rule must also be all-inclusive.

the case of the Geneva Protocol. In the latter case, the opposition of the United States did not matter. Moreover, there was already an authentic interpretation, affirmed in the inter-war years. The question was therefore only to decide whether a new consensus had developed to the effect of interpreting the Protocol in a narrow sense as a result of CW conducted in Viet-Nam and of the efforts of the United States to induce other countries to adopt its own restrictive interpretation of the prohibition. The strength of opinion in favour of the resolution showed conclusively that this erosion of the conventional prohibition had not taken place.

With the customary rule the situation is different. In this case it is not possible to ignore the opposing vote of the United States. If one were to assess the beliefs of states about the scope of the customary rule on the basis of the vote on Resolution 2603 A (XXIV), one would be forced to conclude that whereas the resolution constituted a demonstration of massive support for the broad interpretation, nonetheless the disagreement over the scope of the prohibition persisted, and the resolution did not provide decisive evidence of a consensus. The evidence it provided showed, instead, that for the time being there is no consensus sufficient to affirm a customary prohibition which encompasses herbicides and irritant agents.

In the case of a customary rule it is not possible, as it is for a conventional rule, for diverging interpretations to coexist and for different states to be bound towards third parties by rules of differing scopes. For a universal customary prohibition the scope is the scope corresponding to the least common denominator: the *common* consent of states in practice and legal conviction. Assuming, therefore, that the position of the United States in respect of irritant-agent weapons and herbicides has any legal consequence for the scope of the customary prohibition, then that consequence can only be in the direction of a *general* limitation of the customary prohibition, imposed upon all countries, even as regards conflicts in which the United States is not involved. On the above assumption about the decisive role of recent UN resolutions in *creating* the customary rule, one would therefore be forced to conclude that the rule does not prohibit the use of irritant-agent weapons and herbicides. A broader conception of the customary prohibition could, still under that assumption, not satisfy the first criterion of a customary prohibition of the law of war: to be observed by almost all states in almost all conflicts.

But the assumption itself is not tenable. The resolutions passed by the UN General Assembly in 1966 and on subsequent occasions did not *create* the customary rule. They only proved its existence. As shown in the preceding section, the rule itself antedates the use of herbicides and irritant-agent weapons in Viet-Nam. The practice of the United States and of a

few of its allies in the last decade must be examined not from the angle of its contribution to the *formation* of a customary rule, but from the angle of its *conformity* with an already existing rule.

All the available evidence shows that the customary prohibition which had developed prior to the use of chemical weapons in Viet-Nam is broad in scope. The record of past state practice, at least as regards the use of irritant-agent weapons, is no different from the record of use of other, more injurious weapons. Irritant-agent weapons were used on a large scale in World War I, as were lethal and seriously disabling agents, but all subsequent instances of their use have assumed the character of outstanding exceptions. There is no evidence in the practice of states suggesting an exemption of irritant-agent weapons from the existing prohibitions. Italy used both irritant-agent weapons and more injurious ones in Ethiopia, as did Japan in China. Formally, the Geneva Protocol was inapplicable in both cases since at that time neither Ethiopia nor Japan had been parties to the Protocol. Nevertheless these acts were condemned by the international community. The most authoritative body to be found, the Assembly of the League of Nations, flatly stated, in respect of the Japanese attacks, "that the use of chemical and bacteriological methods in the conduct of war is contrary to international law".[50] On neither occasion was there any reference by anyone to supposedly diverging rules of customary law regarding irritant-agent weapons on the one hand, and more seriously disabling agents on the other. Had anyone felt that the affirmation of a general ban on "the use of chemical ... methods in the conduct of war", applicable to states which, like Japan, were not bound by the Geneva Protocol, overstretched the common consent of states to be bound by a customary prohibition, then this would have been the time to say so. Not many years before, on the occasion of the British memorandum of 1930, the broad interpretation of the conventional rule had received strong and uncontested support. In the light of this, of the discussions in the League of Nations Disarmament Committee, and of the protests by the Council and the Assembly of the League against the Italian and Japanese violations, the presumption of the identity of scope between the customary and conventional rules was unavoidable. Caution would have dictated a dissenting statement by upholders of the narrow interpretation. The failure of states to put on record their objection to the Assembly's sweeping formulation of the customary prohibition can only be interpreted as an expression of assent to that formulation.

This is not contradicted by the fact that in the disarmament negotiations of the inter-war years the United States had voiced its hesitation towards

[50] See p. 118 above, and Volume IV, pp. 175–92.

an all-inclusive definition of the prohibited chemical weapons, for, if one is to judge from the League of Nations disarmament negotiations in 1932–33, the United States had given up its opposition to this broad definition several years before the Italian attack on Ethiopia, and long before the Japanese attack on China.[51] In fact, except for the last decade, the United States does not seem to have ever maintained that the use of irritant-agent weapons in war was permitted.[52] Nor has anyone else;[53] least of all Britain and Australia which now support the US position in part.[54] In 1930 both of them apparently adhered to the broad interpretation of the prohibitions.[55] It is evidently correct when Blix, in conclusion of his study of the inter-war years, finds "unanimous acceptance of comprehensive definitions of the prohibitions, whether they were seen as flowing from customary law or from conventional law". [264]

With herbicides it might seem less obvious that their use was already prohibited under customary law before their military employment in Viet-Nam began. Until then, the possibility of their military usefulness had not been clearly perceived—or at least had not attracted much attention. Apart from small-scale use by the British in Malaya in the 1940s and 1950s there is no record of state practice concerning the use of these weapons (except a consistent, and possibly significant, record of abstention). Nor is there much evidence regarding the beliefs of states about the legitimacy of the use of antiplant agents in war. It is, however, pertinent to note that in the League of Nations disarmament negotiations, biological agents destroying plants were considered to be comprised under the existing prohibition. It was moreover rather widely (but not universally) assumed that the CBW prohibition applied to all states, regardless of their explicit adherence to the Geneva Protocol. There was never any question of excluding antiplant agents from the prohibitions. Chemical agents were

[51] See Volume IV, pp. 153–54 and 173–74.

[52] Apparently the first formal assertion to this effect came after the use of irritant weapons in Viet-Nam had already begun.

[53] Japanese officers, as noted on p. 118, had however asserted after the war that the use of certain irritant-agent weapons was not prohibited by international law because it caused neither death nor permanent injury.

[54] In fact only Australia fully endorses the US position. It maintains, as does the United States, that "riot-control agents" fall outside the scope of existing prohibitions, customary as well as conventional. The United Kingdom holds the use of tear gases in war to be prohibited but excludes one irritant agent, CS, from the prohibitions on the grounds that it is not "significantly harmful". It was shown on pp. 60 ff. above that the reasoning behind the UK position rested on a faulty reading of Britain's own previous position.

[55] See pp. 51–53. There was no evidence that Australia had changed its view as regards the scope of the CW prohibitions until it became known that it had been using irritant-agent weapons for some time in Viet-Nam.

not explicitly referred to.[56] In the discussions in the United Nations during and after 1966, herbicides have usually been assumed to have the same status under international law as irritant-agent weapons.

Even though biological antiplant agents were discussed in the 1930s, those discussions only concerned their use against crops and cultivated areas. It would therefore not have been unreasonable to contend that chemical herbicides like those used in Viet-Nam, particularly in so far as they are used not against crops but to change the physical environment in the jungle, constituted a new weapon.[57] It is clear, however, that there has been no tendency to claim a different legal status for the use of herbicides according to the nature of the target. Neither in the practice of the United States in Viet-Nam or at any earlier time, nor in the legal convictions of other states, has any such differentiation been made.

In any case the newness as such of a weapon has no bearing upon its legitimacy. The absence of evidence about the beliefs or practices of states does not necessarily tell against the existence of a prohibition in customary law. It is firmly established that there is a prohibition of CBW which applies to a certain—broad or narrow—category of weapons, and its application to newly discovered agents depends upon the applicability to the latter of those general principles by virtue of which the former are prohibited. There does not need to be a practice and an accompanying belief for each weapon type taken separately. If, according to these general principles, a particular weapon belongs to the category of prohibited weapons, then it is enough to show that no specific custom has developed to the effect of *excluding* it from the prohibition. It is evident that a single instance of use such as the use of herbicides by the United States in Viet-Nam, even if it is as sustained, deliberate and open as it has been in that war, can, if it does not conform with an existing rule, constitute a violation of that rule, but that it cannot on its own constitute a contrary custom. Those who have sought an argument for the legality of herbicide warfare in the lack of relevant practice due to the newness of the weapon have failed to prove the necessary premise that herbicides are not CW agents in the sense of the customary prohibition.

[56] It was thought that chemical antiplant agents that would not also be harmful to human beings and animals could not be produced. See above, p. 75.

[57] One might have tried to argue that herbicides, when used for this latter purpose, are entirely different from chemical weapons in the usual meaning, that their military usefulness lies not in their chemical nature but in their optical effects, and that they are therefore to be grouped with such devices as smoke screens which are not included in the CBW prohibitions. Indeed, an argument along such lines seems to be the only one that could have rendered plausible the exemption of at least some uses of herbicides from the general prohibition. That possibility is, however, purely academic since it does not correspond to actual legal convictions.

Biological antiplant agents, it was noted, are definitely prohibited under the Geneva Protocol, and it would be difficult to provide any positive evidence—or even a coherent argument—to show that the use of chemical antiplant agents is not also prohibited under that treaty. A demonstration of the legality of herbicide warfare under the customary prohibition would therefore have to be based on the claim that the principles on which the customary prohibition rests are not those of the Geneva Protocol but of the Hague Regulations. That is impossible to show since the customary rule is evidently marked by both. Moreover, the identity of scope and objective of the Geneva Protocol and of the customary rule has been expressed virtually unanimously in several recent UN General Assembly resolutions. In any case it is not at all certain that herbicide warfare would be permitted under the Hague rules.[58]

Until the use of chemical weapons in Viet-Nam began, the beliefs of states and their practice over half a century, and particularly the practice of the United States itself, had shown beyond any possible doubt that the customary rule prohibited the use of all chemical and biological weapons in war. The evidence which tends to suggest the existence of a customary rule of a narrower content is confined to *ex-post* declarations by those states, the United States and Australia, which have been using these weapons themselves. In that context the use of irritant-agent weapons and herbicides in Viet-Nam appears as a violation of international customary law. The belief that the use of these weapons constituted a violation of international law was clearly evidenced by the initial reactions of the international community to these acts. These reactions took the form of condemnation and political isolation of the United States—the form, in other words, of some of the milder sanctions which normally apply to violations of international norms.

It does not seem possible to maintain that the United States should not be bound by a customary prohibition which emerged from the all-encompassing Geneva Protocol long before the 1969 resolution and even before the US use of irritant agents and herbicides in Viet-Nam had begun. Nor, of course, is it possible to maintain that the United States alone—or in conjunction with a few allies—can unilaterally restrict the scope of existing rules of customary international law, simply by disregarding the obligations they impose. Custom, once established, exists regardless of the contrary wishes of individual states. In any case there has been too brief a time-span, too tiny a minority of states explicitly favouring a restrictive interpretation, and too massive and determined an opposition to an erosion

[58] See chapter 3, p. 71.

of the existing prohibitions for recent use of irritant-agent weapons and herbicides to have established a new and more permissive custom.

The purpose at this point in the discussion is to assess the legal significance of the employment of chemical weapons in Viet-Nam as regards the scope of the customary prohibition of CBW. It is not to pass judgment on the legality or otherwise of that practice. In any case the analysis and formulation of general norms and the judgement of concrete acts in accordance with these norms are quite different things. Nevertheless a few remarks on the application of the customary CBW prohibition to US chemical warfare in Viet-Nam are in order, if only to warn against unduly simple conclusions which might otherwise seem to be implicit in the above discussion.

In a formalist conception of the law a custom exists, or it does not, and there is no need for a third category. Thus, if the International Court of Justice were asked for an advisory opinion on the scope of the customary rule, it would have to adopt a definite stand. But when, as is the case here, no such authoritative decision is available, a more flexible conception is needed.[59] One has to weigh pieces of evidence each of which, taken on its own, is insufficient and which, taken together, may not add up to an entirely consistent or a fully compelling picture. In the formation of a customary norm there is almost inevitably a period of ambiguity in which the practice of states and their legal convictions have not had sufficient time in which to express themselves. In this situation gradations of all kinds must be taken into account such as the cumulative effect of acts conforming with or running counter to the presumed norm, expressions of legal convictions which are only "quasi-unanimous", or the insistence with which they are reiterated. It is also quite possible that, although the evidence points unambiguously towards the existence of a fairly well-defined norm, actions which are at the limit of what that norm proscribes are more improper than strictly illegal. This possibility is particularly obvious in respect of liability to penal pursuit where the illegal character of the act must be reasonably manifest.

In the case dealt with here—that of a prohibition whose *existence* is universally recognized but whose *scope* may perhaps appear to be capable of divergent interpretations—it is possible that a state using weapons of questionable legal status cannot be charged with violating the law, but that nonetheless its subsequent persistent disregard for the opinion of the large majority of other states may expose that state to the charge of

[59] A somewhat analogous case, that of the cumulative legal effect of successive UN resolutions in relation to the right of a state to refuse to comply with a recommendation, is discussed in Castañeda's study [265].

disloyalty towards the general principles and objectives of the emergent prohibition.

Similarly, the character of the act has an obvious bearing upon the distinction between what is improper and what is illegal behaviour. In the case of the CBW prohibition this limit may be reached somewhere in the transition from civilian-type applications to decidedly military uses of the agents. Examples might be the transition from the use of herbicides in war for defoliating base perimeters and roadsides to the use of these same agents for crop destruction and defoliation of large forested areas, or the transition from the use of irritant agents in war for strictly police-type operations, to their relatively indiscriminate use for softening strongholds or forcing the enemy out of cover prior to attack.[60]

It seems incontestable that the use of herbicides and irritant-agent weapons in war constitutes, in principle, a violation of the customary prohibition as it has developed over half a century. But it is equally clear that even in wartime, the occasional use of irritant agents for genuine police purposes or of herbicides to clear the perimeter of a base, while it may perhaps be criticized from a political angle as improper or reckless under the circumstances, cannot be regarded as a violation of the law of war: as a war crime. Illegality does not arise unless these twin-purpose agents are used with excessive frequency, in patent disregard of the concerns and appeals of other states, and after there has been a shift in the purpose and methods of use that indicates that these agents are no longer used for civilian-type operations but as military weapons: as methods of warfare. At which point, precisely, that limit between the improper and the illegal use of such agents is transgressed does not matter here, and it is in any case a question on which opinions may legitimately differ.

In conclusion then, and depending on the circumstances in which they are employed, the use of herbicides and irritant-agent weapons in Viet-Nam either falls outside the law of war altogether, or else constitutes a violation of one of its provisions: the customary law prohibition of CBW. For it must be recognized that if the existence of the customary rule antedates the Viet-Nam War, then that rule must have been all-encompassing in scope. And it must also be recognized that in that case the conduct of the United States in Viet-Nam is not sufficient upon which to predicate the development in practice and common legal conviction of a subsequent, more restrictive custom. Only on the impossible assumption that the customary rule had developed *after* the use of certain CW agents in Viet-Nam had begun, could it be maintained that the rule must be

[60] See Volume I, pp. 162–210.

correspondingly narrow in scope because the refusal of the United States to be bound by an all-encompassing prohibition had precluded that consensus of legal conviction which customary law presupposes.

As regards the legal significance of CW in Viet-Nam, what emerges from the above considerations is that this practice is neither evidence of the narrow scope of a custom in the process of formation, nor is it evidence that a process of erosion has taken place.[61] Instead, it must be regarded, from the point of view of its implications for the content of the norm, as a deviation from existing customary law obligations.

If there is a possible indeterminateness about the status of herbicides and irritant-agent weapons under the customary law of war, this raises the question of the limits of this ambiguity, of whether there are other agents the status of which is, or could be construed to be debatable. In fact this is not the case.

First, one may ask whether the customary prohibition applies with certainty to *biological* agents used for similar purposes: against plants or to cause temporary and benign ailments in man. In view of the absolutely comprehensive character of the prohibition of BW in the Geneva Protocol, which leaves no scope whatsoever for restrictive interpretations, and in view of the universal agreement on the identity of scope of the Protocol and of the customary rule expressed in the 1966 UN General Assembly resolution and in several later resolutions[62] and also in the preamble of the biological and toxin weapons disarmament convention, the all-inclusive character of the BW prohibition in customary law cannot be questioned. Nor is it questioned by anyone today.

Secondly, one may ask whether doubts could be had regarding the status of incapacitating chemical weapons under the customary prohibition. In this case, as in the case of herbicides, evidence on the practice of states is simply lacking. While these weapons have appeared in works of fiction for a long time, and while they attracted some attention in the inter-war years, militarily attractive incapacitating-agent weapons have only been developed in recent years, if at all. To determine whether the customary rule applies to these weapons, one must therefore examine whether the general principles by virtue of which the use of more injurious weapons

[61] In this connection resolution 2603 A (XXIV) passed by the UN General Assembly in 1969 assumes its full importance. For erosion of the norm to have taken place it would have been necessary that other states had followed the lead of the United States and that a general practice of interpreting the customary prohibition restrictively had evolved. That this remains a possibility is rendered evident by reports that Portugal is employing herbicides and irritant-agent weapons in its colonial wars. (See Volume I, pp. 210–11.) On this possibility of erosion see Volume V, chapter 1 and especially pp. 34–47 and 52–58.

[62] See pp. 121–22.

is prohibited apply to them. Their newness alone cannot free them from existing prohibitions.

But in this case the situation is clear. Whether the customary prohibition is thought to derive from the prohibition of poison of the Hague Conventions or from the Geneva Protocol, the concept of a poison certainly includes agents which incapacitate without killing. For the use of incapacitating-agent weapons to be legitimate under the customary law of war, it would therefore be necessary that there had developed a specific custom to the effect of excluding them from the general prohibition. It is evident that this has not happened. On the contrary, the large majority of states have explicitly affirmed that in their view the use of any chemical agent of warfare whatsoever is prohibited, and it does not seem that any state has ever maintained that it could legitimately resort to incapacitating-agent weapons (other than those used for "riot control" which, from a purely semantic angle, could be conceived of as a subcategory). Nor, apparently, have these agents been used in war. Rumours that the United States had used them in Viet-Nam were denied by the US Department of Defense [266].

It is also significant in this respect that the argument for the legality of using irritant-agent weapons has consistently stressed their civilian uses as the main reason for their exemption from the prohibitions of the law of war. However irrelevant that argument is legally, it is nevertheless indicative of a belief that, from the point of view of their legality in warfare, incapacitating agents belong not with irritant agents, but with lethal ones.[63]

Whatever may be the final outcome of present disputes over the scope of the customary prohibition, and even if attempts to impose the restrictive interpretation were successful, it should not be assumed that the customary rule is so vulnerable that other countries could in the future decide to bypass it and reduce its prohibitory scope still further. The Geneva Protocol and the customary rule are generally believed to be co-extensive in scope. This implies that one cannot claim that the scope of the latter is narrower than such meaning as can in good faith—but in disregard of legal evidence —be read into the former. In other words, the range of disagreement over the customary rule cannot exceed the difference between the broad and narrow interpretations of the Protocol.

[63] President Nixon's decision to extend the US renunciation of the first-use of lethal chemical weapons to incapacitating chemicals (but not to "riot-control agents") is probably indicative of analogous beliefs. That declaration, however, had the form of a statement of policy and its direct relevance to the issue at hand is therefore very limited.

Chapter 6. Sanctions against violations

The rules which prohibit the use of CB weapons in war do not contain any indications on the sanctions which are applicable in the event of a violation. This silence can only be interpreted as a transfer of the matter to the general rules regarding sanctions against infringements of the laws of war. These are of essentially three kinds: compensation for the victim state, reprisals and penal sanctions. It will suffice here to deal with the last two kinds of sanctions.

Being a violation of the law of war, the use of CB weapons in war constitutes by definition a *war crime*. That point is indisputable, even if its implications have not been implemented.[1]

In its report to the Preliminary Peace Conference, dated 29 March 1919, the Commission on responsibilities drew up a list of 32 categories of violations of which Germany was accused, including the charge of using "deleterious and asphyxiating gases". Similarly, the list of charges filed before the International Military Tribunal of Tokyo enumerated a number of violations of the laws and usages of war, which, as already noted, included:

> Use of toxics, contrary to the international declaration concerning asphyxiating gases, signed, among others, by Japan and China at The Hague on July 29, 1899, and Article 23 (a) of the Annex to the Fourth Hague Convention of 1907 and to Article 171 of the Treaty of Versailles. During the wars of Japan against the Republic of China, toxic gases were used. [268]

In its decision, however, the Tokyo International Military Tribunal did not specify actions related to this paragraph of the indictment.[2]

[1] In the trial before the Soviet military tribunal at Khabarovsk on 25–30 December 1949, referred to above (p. 119), Japanese servicemen were charged with having "prepared and used" a bacteriological weapon [267]. However, the military tribunal based the sentence exclusively on a text of domestic law and it contains no reference to international law. In any case the "preparation" of bacteriological or chemical warfare is not illegal either by virtue of the Geneva Protocol or by virtue of general international law. According to part of the evidence admitted against the Khabarovsk defendants, the preparation consisted in experiments on human beings. In this case, and according to the time and place of the act and the nationality of the victims, the offence was either a violation of domestic law or a war crime, or else a crime against humanity.

[2] A British military manual includes "using asphyxiating, poisonous or other gases, and all analogous liquids, materials or devices" and "using bacteriological methods of warfare" among "punishable violations of the laws of war, or war crimes" [269]. Although using the terms of the Geneva Protocol, this indictment is enunciated without any reference to the conventional nature of the prohibition. It is not explicitly restricted to the parties to the Protocol.

The relationship between the state which has used CB weapons and its victims may not be governed by the law of war. This would be the case if, for instance, the victims were subjects or *protégés* of the state in question, or stateless persons without any legal bond with an enemy belligerent power. If so, the question could arise as to whether the use of CB weapons can constitute a *crime against humanity* or, possibly, a crime of *genocide*. It seems that the answer to this two-fold question must be negative: it cannot *per se* constitute such a crime, because it is not the weapon but the action which is envisaged in the definition both of a crime against humanity and of genocide. The German military and civilian personnel of the extermination camps were not tried for having used poisonous gases in violation of the Geneva Protocol, but for a war crime or a crime against humanity consisting in murder or extermination.

Reprisals, materially, consist of an act which is itself prohibited by the law of war. That same law of war gives a belligerent state which is the victim of a violation a title authorizing it to commit an otherwise prohibited act. This apparent contradiction finds its explanation and the reason for its existence in the absence of a central authority, higher than that of the states, and having the requisite competence and force to ensure respect for international law. Hence the *function of enforcing international law* constitutes the legal basis of reprisals. The act, permitted as an exception, nevertheless retains its illegal character, and the legal rule, violated by both sides, remains in effect and regains its full obligatory strength as soon as the act of reprisal has been consummated.[3]

Such are reprisals in theory: their purpose is to ensure the observance of the law. But this should not blind one to the fact that in practice reprisals are an inefficient and dangerous means towards this end and have often been used as a convenient cloak for disregarding the laws of war [270]. The unrestricted submarine warfare of World War I and the unlimited air bombardment of enemy territory in World War II are warning examples of how the observance of the laws of war can be lost in a welter of reprisal and counter-reprisal. For Kalshoven, the author of a recent important work on reprisals, "the conclusion seems inescapable that the balance of the merits and demerits of belligerent reprisals has now become so entirely negative as no longer to allow of their being regarded as even moderately effective sanctions of the laws of war, and of the 'law of The Hague' in particular . . ." [271].

[3] An exception to this would only occur if the violations were serious and repeated, and the belligerent states had a common intention, obvious and non-ambiguous, to abrogate the rule in question by a contrary custom. Even then abrogation presupposes that it is not only a small number of belligerents which violate the rule and that the majority of the military powers not engaged in the conflict approve of the abrogation.

In order to retain the status of a legal institution, reprisals, introduced as a necessary evil, are subject to certain conditions. The first condition specifically concerns their object which must be the respect and maintenance of the rule which the enemy has violated. Reprisals can only have the purpose of forcing the infringing belligerent to desist from violating the rule. This primary condition governs a series of other conditions which are secondary from the theoretical point of view, but which are in practice the most important. These concern the *relationship, in kind and in degree,* which exists between the violation and the reprisals, the determination of the *active and passive subjects* of the reprisals,[4] and the restrictions imposed upon the nature and the object of reprisals by the principles of humanity and civilization.

The conditions regarding the *relationship between the violation and the reprisal* raise certain important problems. In terms of the Geneva Protocol these problems can be expressed in two main questions: (*a*) Does the prohibition proscribe resort to CBW in reprisal against a violation of a *rule foreign to that Protocol?* (*b*) In regard to reprisals in response to a violation of the Protocol—the case of so-called *reprisals in kind*—what criteria shall establish the relationship in kind and degree which should be observed between the act of reprisal and the violation?

The question as to whether the Protocol and the customary rule prohibit resort to CBW in reprisal against an infringement *other than a violation of these rules themselves,* strictly speaking, does not come under the problem of sanctions but rather under the definition of the field of application of these rules. On this question the Geneva Protocol says nothing, and one might be tempted to conclude that, in applying the general rules of reprisals, the actions prohibited by the Protocol should be considered as permitted in the form of reprisals against a violation of *any rule whatsoever of the law of war.* This is not, however, the view which has prevailed.[5]

The question arose in the Italian–Ethiopian War of 1935–36. In several statements to the Committee of Thirteen of the League of Nations, the Italian Government tried to justify its use of toxic chemicals by maintaining that it constituted legitimate reprisal of war crimes committed by the Ethiopian forces: "torture and decapitation of prisoners; emasculation of the wounded and killed; savagery towards, and the killing of, non-combatants; systematic use of dum-dum bullets, etc." [273]. The Italian

[4] This question has already been dealt with in connection with the reservations to the Protocol and their affirmation of the active and passive solidarity of allies (pp. 82–86).
[5] The affirmation in Federal German directive to the armed forces ZDv 15/10, according to which serious violations of international law could justify recourse to CW or BW by way of reprisal [272], cannot be considered as representing positive law.

Government pointed out that the Geneva Protocol contained no provision excluding the exercise of the right of reprisal by way of exception to the general principles admitting that right [274].

The Committee considered that the argument advanced by the Italian Government could not justify the use of asphyxiating, poisonous or similar gases [275]. The point was put most clearly by the Portugese delegate [276], who formally condemned the use of these weapons in war, whatever the reasons alleged for their employment.[6]

Actually, the belief in the mandatory character of the Protocol, even in cases when the belligerents violate other rules, is already apparent from the reservations which some states made upon ratifying it.[7] The general tenor of these reservations is such as to relieve the reserving party of its obligations in regard to an enemy state whose armed forces or whose allies fail to respect the prohibitions laid down *in the Protocol.* This reservation makes little sense unless it is assumed that the parties to the Protocol understand the Protocol itself to be in effect an *unqualified* renunciation of first use of CB weapons against other parties to the Protocol.[8]

Moreover, the discussion in the Preparatory Commission for the Disarmament Conference of the League of Nations and at the Disarmament Conference itself showed that a good number of states were opposed even to the "second use" of gas as a means of reprisal, under any circumstances. Those who insisted on the right to resort to such reprisals referred to collective measures rather than to individual action by the victim state and only after an impartial investigation had established the use of chemical warfare by an aggressor. In any event, there was no question of using chemical weapons in reprisal for infringements of rules of warfare other

[6] In the above-quoted reply to the Committee of Thirteen [277] the Italian Government had maintained that neither the Committee nor any other organ of the League of Nations would be competent to give an interpretation of the Geneva Protocol. That is correct. At this point, however, the question is not which interpretation the League of Nations, as a body, might have given to the Protocol, but which interpretation was given by those parties to the Protocol (other than Italy) which took part in the deliberations of the Committee.

[7] See above pp. 79–89, especially regarding the continued validity of these reservations, and appendix 2.

[8] The fact that it is difficult to find a reason why the reservation would have been formulated in terms of the Protocol alone, if at the same time the right of reprisal was understood to apply also in case of violations of other rules of the law of war, does not, of course, make the interpretation advanced here legally compelling, *stricto sensu.* These reservations *could* have been made *ex abundanta cautela.* In any case it can legitimately be claimed that the right to *abrogate completely* the obligations stemming from the Protocol for the entire duration of the hostilities which the reservation enunciates, pertains to an entirely different régime from that of reprisals and therefore cannot have any legal repercussions on the right to *suspend temporarily* the Protocol while reprisals are being enacted, even if the latter were thought to apply to a wider range of situations.

than those enunciated in the Protocol. No one advocated such an approach.

Finally, it may be noted that the principle of the equality of belligerents under the law of war absolutely excludes the possibility of using the prohibited weapons for reprisals against an act of aggression (violation of the *jus ad bellum*). CB weapons cannot legally serve a general function of deterrence.

In conclusion it may be affirmed that the prohibition of CBW has a particular status as concerns the right of reprisal: in principle, reprisals by means of chemical or biological methods of warfare are permitted only, if at all, against a violation of the CBW prohibition itself.[9]

The right of reprisal does not entail the general suspension of the prohibition of CBW. The maintenance of the rule and the principle of proportionality[10] constitute strict limits to the right of reprisal, it being understood, however, that an act of reprisal may—still within a reasonable margin—be more severe than the initial offence. For the principle of proportionality must be made compatible with the object of the reprisals, the object being to impose a constraint upon the infringing belligerent with a view to making him respect in the future the rule he has transgressed. This restraint may involve the necessity of using reprisals more injurious than the violation to which they reply. Provided that it is within reasonable limits, this difference between the violation and the reaction pertains to the nature of the reprisals and does not render them illegal. It is clear that by virtue of this requirement of proportionality, the prohibitions of CB weapons are to be sharply distinguished from a mere renunciation of first use, for in the latter case no limitations on use are imposed once the ban has been broken.

Reprisals in kind are the sort of reprisals best adapted to conformity with the principle of proportionality. Nevertheless their application in the case of the CBW prohibition raises certain questions because of the difference between the extensive and the restrictive interpretations of the prohibited weapons. If an attacker who adheres to the restrictive interpretation em-

[9] The problem of whether a non-nuclear nation attacked with nuclear weapons could make use of CBW for reprisals cannot be dealt with here because it would require a detailed analysis of the status of nuclear weapons in international law. Schwarzenberger holds that "Once there is a large-scale use of weapons of mass destruction by one side, any form of retaliation with the same or other weapons of mass destruction is probably compatible with international law" [278]. It can well be questioned, however, if that *retaliation* can still be qualified, legally, as reprisals. Cf. on the same problem O'Brien [279].

[10] This principle does not require strict equivalence—which is in any case often impossible—but a *reasonable proportionality:* the reprisal action should not be excessive in comparison with the severity of the violations committed by the enemy [280–282]. The US Military Tribunal of Nuremberg in the "Hostage Case" ruled that excessive reprisals constitute a war crime [283–284].

ploys weapons which in his view are legitimate—herbicides or irritant-agent weapons—is it then legitimate for the aggrieved party to respond with means which, in the opinion of both belligerents, are prohibited (assuming of course that a reasonable proportionality is maintained and that the aggrieved party has been advocating the extensive interpretation in good faith)? This is a question of direct practical importance in the case of a confrontation between countries advocating divergent interpretations. Answering it in the affirmative amounts to postulating the right of the aggrieved party to impose upon his enemy his own interpretation of the prohibition; answering it in the negative amounts to allowing the attacker to impose *his* interpretation on the attacked.

It is certainly the case that where an attack is conducted by means of irritant-agent weapons it is legitimate for the aggrieved belligerent to consider it a violation of the law of war (provided, of course, that it has itself been advocating the extensive interpretation) and, if this is deemed appropriate and not out of proportion with the initial offence, to conduct reprisals with casualty-agent weapons (weapons with agents which are lethal, incapacitating or otherwise gravely injurious).[11] In the case of an initial attack with herbicides, the illegal character of the initial act of CW is not so flagrant, and it is less certain although defensible that the aggrieved party could legitimately regard it as a breach of the prohibitions entitling him to resort to casualty-agent weapons in reprisal.[12]

A belligerent supporting in good faith the extensive interpretation of the prohibitions is entitled to interpret an attack against him with irritant-agent weapons (and perhaps also an attack with herbicides) as a violation of international law. This entitles him to conduct reprisals, but it should be noted that it does not necessarily give him the right to engage in penal prosecution. Under the general rules governing the repression of war crimes, the prosecuting state is obliged to take into account the restrictive interpretation which the enemy might have adopted. It was shown that the use of irritant-agent weapons—as also, probably, of herbicides—is a violation of the law of war. But this violation proceeds from interpretations of the Protocol and of the customary rule, the certainty of which may not appear to be so manifest that the action can be held to be a crime on the part of the commanders who ordered it, and the personnel who executed

[11] Irritant-agent weapons can be used in a way which is lethal in effect by combining them with, say, conventional firepower (see Volume I, pp. 185–99). These agents may also be lethal in themselves if employed in high enough concentrations (*Ibid.* pp. 151 and 205–209). Reprisals using lethal or otherwise gravely injurious agents are therefore not necessarily out of proportion with an initial attack confined to irritant agents.
[12] See the discussions above of the extensive and restrictive interpretations on each of these points.

it. Knowledge of the illegality of the act, a condition for penal responsibility, might be lacking. The same applies *a fortiori* when the offending nation is not a party to the Protocol and is bound only by the customary rule.

This latter remark applies only to chemical weapons. The generality of the expression "bacteriological methods of warfare" used in the Protocol and the identity of scope between the customary and conventional rules, affirmed recently in a number of virtually unanimous resolutions by the UN General Assembly, rules out the possibility that individuals prosecuted for having made use of biological weapons could offer in their defence a narrow interpretation which their government had given to the existing prohibitions.

The existence side by side of diverging interpretations of the prohibition introduces an element of anarchy into the situation, not only as regards the legality of first use of certain forms of chemical weapons, but also in respect of the régime of reprisals.

Let us assume that states A and B advocate the restrictive and extensive interpretations, respectively. State A will then feel free to use, say, irritant-agent weapons against state B. But if this happens, state B is entitled to consider this a breach of the law and to conduct reprisals—duly limited to ensure proportionality, but not necessarily involving the same agents—against state A. Agents may be used in this act of reprisal which both states would admit as belonging to the category of prohibited weapons. In consequence of the restrictive interpretation it gives to the prohibition, state A must insist that it had committed no illegal act and that the action of state B in fact constitutes the first use of prohibited chemical weapons. It may then decide to engage in reprisals against this presumedly illegal act, using the same admittedly prohibited weapons or even more injurious ones, feeding once more the spiral of escalation. But the process can even go further than this without either belligerent departing (in its own view) from the basis of law: for it is now logical for state B to consider this last attack by state A not as a case of reprisals against an illegal act (its own previous attack), but as a case of counter-reprisals. Such counter-reprisals are prohibited when they are directed against reprisals which were in themselves legal, and state B is therefore entitled to respond with renewed reprisals. This legitimate act of reprisals (in the perspective of state B) is itself an illegal act of counter-reprisals when considered from the position of state A. The latter is then (in its own view) entitled to conduct reprisals—and so forth.[13]

[13] The clauses in the reservations to the Geneva Protocol affirming the solidarity of allies introduce further elements of anarchy into this situation. The possibility of such a process of "legal" escalation (or of escalation in which the rights and wrongs soon get

Escalation from agents which are *in themselves* relatively innocuous to the most injurious types can thus take place without either belligerent ever violating the law—or what, in his opinion, is the law.[14] This "legal" escalation rests upon three factors: (1) contradictory interpretations of the legal definition of the prohibited weapons: (2) the rule of the law of war prohibiting counter-reprisals: and (3) the fact that the reprisals do not have to be strictly identical in kind and in degree to the violation which it is their purpose to punish. The rules governing reprisals are such that an ambiguity in the definition of the prohibited weapons at one end of the spectrum is propagated throughout that spectrum and may in practice invalidate the prohibition altogether.

A last problem related to the question of reprisals in kind is whether CB weapons form a whole from the standpoint of reprisals. Is a belligerent, having been the victim of a violation of the CBW prohibitions, free to choose either a chemical or a biological method of retaliation? In strict logic, it must probably be admitted that BW and CW are interchangeable in this sense, so that for a *substantially equal degree of harmfulness* a chemical agent could be used in reprisal against a biological attack and vice versa.

Evidently, the practical importance of the right to conduct reprisals against a CW attack by means of biological weapons is slight in view of the stringent limitations imposed by the principle of proportionality. If chemical weapons were used in a way that confined their effects to the battlefield—and the experience of World War I shows such confinement to be possible—it would certainly be out of proportion to respond with biological weapons which primarily affect the civilian population. In the case of an unrestrained use of chemical weapons and of reprisals by means of biological weapons, "proportionality", perhaps, might not seem to be violated, but in this case it can hardly be maintained that these "reprisals" serve to make the enemy abide by the laws of war. This would be more akin to indiscriminate wrecking of vengeance, and such acts lie outside the field of the law of war altogether.

blurred) would be even more enhanced if there had been reality to the claim in the reservation clauses according to which the prohibition is limited to a mere no-first-use commitment.

[14] This idea of escalation is one reason which is often invoked against the thesis that some category or other of agents should be excluded from the legal definition and could be exempted from the prohibition without at the same time undermining the prohibition as a whole [285–287]. Even if an orderly process of stepwise escalation as detailed above may seem unlikely and may never occur in practice, the first few steps could be taken on one or several occasions in the future. Were this to be the case the practice of non-use and the conception of the unconventional character of CB weapons use upon which the restraining effect of the legal rule ultimately rests would become eroded and the effective prohibitory scope of the prohibition would have shrunk correspondingly. This is discussed in greater detail in Volume V, chapter 1.

But even aside from the question of proportionality, the legitimacy of using biological weapons in reprisal—whether against CW or BW attacks—increasingly seems debatable for another reason: one finds today a widespread awareness of the absolutely uncivilized character of any use of BW under whatever pretext, and clear signs of the development in customary and conventional law of a complete and unconditional prohibition of BW.

In the 1930s there was already a widespread conviction that BW reprisals were prohibited. This found expression in the draft convention of the League of Nations Disarmament Conference whose Article 39 provided that the parties would abstain from using chemical weapons subject to reciprocity, but would abstain unreservedly from BW [288]. This text, which was adopted in a first reading, never became effective for reasons unrelated to this question.

More recently, a number of countries have declared their willingness to forego present and future possession of biological weapons. The most important of these is the unilateral renunciation of possession of biological and toxin weapons by the United States. The US decision to destroy existing stocks will amount to a substantial disarmament measure. More significant still is the signing in April 1972 of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction. This treaty explicitly recognizes the right of the parties to withdraw from it. Formally, therefore, it does not amount to an explicit recognition of the absolutely unlawful character of the use of biological weapons, even for identical reprisals. Nonetheless, the cumulative effect of all these acts of actual or potential renunciation of possession amount, from a practical point of view, to acts of recognition of an unconditional obligation to refrain from the use of biological weapons. For if they may not even be used for reprisals in kind, the possession of biological weapons can no longer serve any legitimate purpose.

Reprisals are expressly prohibited in regard to various categories of persons and property protected by the four Geneva Conventions of 1949.[15] But in addition to this it is generally admitted that reprisals are limited by the *principle of humanity* and the *principle of civilization*.[16] These absolutely forbid—even under the right of reprisals—recourse to methods

[15] Convention I, Article 46; II, Article 47; III, Article 13, paragraph 3; IV, Article 33, paragraph 3.

[16] For example, Article 74 (e) of the Draft Additional Protocol to the Four Geneva Conventions of 12 August 1949, drawn up by the International Committee of the Red Cross for the Conference of Government Experts on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts (May–June 1972) provides: "the belligerent resorting to reprisals must, in all cases, respect the laws of humanity and the dictates of the public conscience" [289].

which should be considered as uncivilized by their nature, by the volume or intensity of the damage inflicted, or because of the status of the victims. It can hardly be contested that BW, at least, belongs to this category of totally prohibited acts. In view of the uncontrollable nature of biological weapons and of the indiscriminate destruction their use would entail, that conclusion seems inescapable, even if its implications (as indicated, among others, by the withdrawal clause in the biological and toxin weapons disarmament treaty) have not been generally recognized.

The current tendency towards abdicating the right of reprisal (as regards biological weapons) is therefore not indicative of a departure from general legal principles admitting that right, rendered necessary by overriding moral considerations. It is rather the consequence of a consistent application of these legal principles themselves. At some point in the development of the law there is a recognition of the absolutely inhumane and uncivilized character of the use of biological weapons under any circumstances and whatever the pretext. At this point, the logic of developments within the law of war breaks the confines of that field. The transition from a conditional prohibition to an absolute prohibition opens the way to the field of the law of disarmament: renunciations of use fuse with renunciations of possession. As shown in Volumes IV and V of this study, it is this point of awareness, of rupture and of fusion which is now being reached.

Appendix 1

Early treaties and draft treaties related to CBW

Declaration of St. Petersburg of 1868 to the Effect of Prohibiting the Use of Certain Projectiles in Wartime, signed at St. Petersburg, 29 November – 11 December 1868

...

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

That the sole legitimate end which the States ought to consider during war is the weakening of the military forces of the enemy;

That for the attainment of this it is sufficient to disable the greatest possible number of men;

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

That the employment of such arms would therefore be contrary to the laws of humanity;

The contracting Parties engage mutually to renounce, in case of war among themselves, the employment by their military or naval troops of any projectile of a weight below 400 grammes, which is either explosive or charged with fulminating or inflammable substances.

...

Brussels Conference of 1874
International Declaration concerning the Laws and Customs of War, signed at Brussels, 27 August 1874

...

ARTICLE XII

The laws of war do not recognize in belligerents an unlimited power in the adoption of means of injuring the enemy.

ARTICLE XIII

According to this principle are especially *forbidden:*

(a) Employment of poison or poisoned weapons;

...

(e) The employment of arms, projectiles or material calculated to cause superfluous injury, as well as the use of projectiles prohibited by the Declaration of St. Petersburg of 1868.

...

First International Peace Conference, The Hague, 1899
Acts signed at The Hague, 29 July 1899
Annex to the Convention

Regulations respecting the laws and customs of war on land

...

ARTICLE XXII

The right of belligerents to adopt means of injuring the enemy is not unlimited.

ARTICLE XXIII

In addition to the prohibitions provided by special conventions, it is especially forbidden:

(a) To employ poison or poisoned weapons;

(b) To kill or wound treacherously individuals belonging to the hostile nation or army;

...

(e) To employ arms, projectiles, or material calculated to cause unnecessary suffering;

...

Declaration

The Undersigned, Plenipotentiaries of the Powers represented at the International Peace Conference at The Hague, duly authorized to that effect by their Governments,

Inspired by the sentiments which found expression in the Declaration of St. Petersburg of the 29th November (11th December), 1868,

Declare as follows:

The Contracting Powers agree to abstain from the use of projectiles the object of which is the diffusion of asphyxiating or deleterious gases.

...

Second International Peace Conference, The Hague, 1907
Acts signed at The Hague, 18 October 1907
Annex to the Convention

Regulations respecting the Laws and Customs of War on Land

...

ARTICLE XXII

The right of belligerents to adopt means of injuring the enemy is not unlimited.

ARTICLE XXIII

In addition to the prohibitions provided by special conventions, it is especially forbidden:

(a) To employ poison or poisoned weapons;

(b) To kill or wound treacherously individuals belonging to the hostile nation or army;

...

(e) To employ arms, projectiles, or material calculated to cause unnecessary suffering;

...

Treaty of Peace with Germany, concluded at Versailles, 28 June 1919

...

ARTICLE 171

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

The same applies to materials specially intended for the manufacture, storage and use of the said products or devices.

Treaty of Washington of 1922 Relating to the Use of Submarines and Noxious Gases in Warfare, signed at Washington, 6 February 1922

...

ARTICLE V

The use in war of asphyxiating, poisonous or other gases, and all analogous liquids, materials or devices, having been justly condemned by the general

opinion of the civilized world and a prohibition of such use having been declared in Treaties to which a majority of the civilized Powers are parties,

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

Convention for the Limitation of Armaments of Central American States, signed at Washington, 7 February 1923

ARTICLE V

The contracting parties consider that the use in warfare of asphyxiating gases, poisons, or similar substances as well analogous liquids, materials or devices, is contrary to humanitarian principles and to international law, and obligate themselves by the present convention not to use said substances in time of war.

. . .

Appendix 2

The Geneva Protocol of 1925

English and French texts of the Protocol

Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare. Signed at Geneva on 19 June 1925

The Undersigned Plenipotentiaries, in the name of their respective Governments:

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; and

Whereas the prohibition of such use has been declared in Treaties to which the majority of Powers of the world are Parties; and

To the end that this prohibition shall be universally accepted as a part of International Law, binding alike the conscience and the practice of nations;

Declare:

That the High Contracting Parties, so far as they are not already Parties to Treaties prohibiting such use, accept this prohibition, agree to extend this prohibition to the use of bacteriological methods of warfare and agree to be bound as between themselves according to the terms of this declaration.

The High Contracting Parties will exert every effort to induce other States to accede to the present Protocol. Such accession will be notified to the Government of the French Republic, and by the latter to all signatory and acceding Powers, and will take effect on the date of the notification by the Government of the French Republic.

The present Protocol, of which the French and English texts are both authentic, shall be ratified as soon as possible. It shall bear to-day's date.

The ratifications of the present Protocol shall be addressed to the Government of the French Republic, which will at once notify the deposit of such ratification to each of the signatory and acceding Powers.

The instruments of ratification of and accession to the present Protocol will remain deposited in the archives of the Government of the French Republic.

The present Protocol will come into force for each signatory Power as from the date of deposit of its ratification, and, from that moment, each Power will be bound as regards other Powers which have already deposited their ratifications.

Protocole concernant la prohibition d'emploi à la guerre de gaz asphyxiants, toxiques ou similaires et de moyens bactériologiques. Signé à Genève, le 17 juin 1925

Les Plénipotentiaires soussignés, au nom de leurs Gouvernements respectifs :

Considérant que l'emploi à la guerre de gaz asphyxiants, toxiques ou similaires, ainsi que de tous liquides, matières ou procédés analogues, a été à juste titre condamné par l'opinion générale du monde civilisé;

Considérant que l'interdiction de cet emploi a été formulée dans des traités auxquels sont Parties la plupart des Puissances du monde;

Dans le dessein de faire universellement reconnaître comme incorporée au droit international cette interdiction, qui s'impose également à la conscience et à la pratique des nations;

Déclarent :

Que les Hautes Parties Contractantes, en tant qu'elles ne sont pas déjà Parties à des traités prohibant cet emploi, reconnaissent cette interdiction, acceptent d'étendre cette interdiction d'emploi aux moyens de guerre bactériologiques et conviennent de se considérer comme liées entre elles aux termes de cette déclaration.

Les Hautes Parties Contractantes feront tous leurs efforts pour amener les autres Etats à adhérer au présent Protocole. Cette adhésion sera notifiée au Gouvernement de la République française et, par celui-ci, à toutes les Puissances signataires et adhérentes. Elle prendra effet à dater du jour de la notification faite par le Gouvernement de la République française.

Le présent Protocole, dont les textes français et anglais feront foi, sera ratifié le plus tôt possible. Il portera la date de ce jour.

Les ratifications du présent Protocole seront adressées au Gouvernement de la République française, qui en notifiera le dépôt à chacune des Puissances signataires ou adhérentes.

Les instruments de ratification ou d'adhésion resteront déposés dans les archives du Gouvernement de la République française.

Le présent Protocole entrera en vigueur pour chaque Puissance signataire

à dater du dépôt de sa ratification et, dès ce moment, cette Puissance sera liée vis-à-vis des autres Puissances ayant déjà procédé au dépôt de leurs ratifications.

Parties to the Protocol: ratifications, accessions and successions
(The texts of reservations are given below, pp. 160–65)

Country[1]	Notification	Act
France	10 May 1926	Ratification with reservations
Liberia	17 June 1927	Accession
Venezuela	8 Feb. 1928	Ratification
Italy	3 April 1928	Ratification
USSR[2]	15 April 1928	Accession with reservations
Austria	9 May 1928	Ratification
Belgium	4 Dec. 1928	Ratification with reservations
Egypt	6 Dec. 1928	Ratification
Poland	4 Feb. 1929	Ratification
Kingdom of the Serbs, Croats and Slovenes (Yugoslavia)	12 April 1929	Ratification with reservation
Germany[3]	25 April 1929	Ratification
Finland	26 June 1929	Ratification
Spain	22 Aug. 1929	Ratification with reservation
Romania	23 Aug. 1929	Ratification with reservations
China[4]	24 Aug. 1929	Accession
Turkey	5 Oct. 1929	Ratification

[1] Costa Rica, El Salvador, Guatemala and Nicaragua, which are not parties to the Geneva Protocol are, however, bound by the terms of the Convention for the Limitation of Armaments of Central American States which forbids parties to use in time of war "asphyxiating gases, poisons or similar substances as well as analogous liquids, materials or devices". The Treaty was ratified by Nicaragua on 15 March 1923, by El Salvador on 22 May 1924, by Guatemala on 24 May 1924 and by Costa Rica on 24 November 1924 (dates of deposit of the instruments of ratification). Honduras, the fifth signatory power, deposited its instrument of ratification on 10 March 1925 but denounced the Treaty again on 26 March 1953. According to its Article VIII the Treaty remains in force between the other four parties.

[2] On 2 March 1970 the Byelorussian Soviet Socialist Republic stated that "it recognizes itself to be a Party" to the Protocol (United Nations Doc. A/8052, Annex III).

[3] On 2 March 1959, the Embassy of Czechoslovakia transmitted to the French Ministry for Foreign Affairs a document stating the applicability of the Protocol to the German Democratic Republic.

[4] On 13 July 1952, the People's Republic of China issued a statement recognizing as binding upon it on condition of reciprocity the accession to the Protocol in the name of China.

Persia (Iran)	5 Nov. 1929	Accession
British Empire[5]	9 April 1930	Ratification with reservations
India	9 April 1930	Ratification with reservations
Sweden	25 April 1930	Ratification
Denmark	5 May 1930	Ratification
Canada	6 May 1930	Ratification with reservations
Australia	24 May 1930	Accession with reservations
New Zealand	24 May 1930	Accession with reservations
South Africa	24 May 1930	Accession with reservations
Portugal	1 July 1930	Ratification with reservations
Irish Free State (Ireland)	29 Aug. 1930	Accession with reservations
Netherlands[6]	31 Oct. 1930	Ratification with reservation
Greece	30 May 1931	Ratification
Latvia	3 June 1931	Ratification
Siam (Thailand)	6 June 1931	Ratification
Estonia	28 Aug. 1931	Ratification with reservations
Iraq	8 Sept. 1931	Accession with reservations
Mexico	28 May 1932	Accession
Switzerland	12 July 1932	Ratification
Norway	27 July 1932	Ratification
Lithuania	15 June 1933	Ratification
Paraguay	22 Oct. 1933[7]	Accession
Bulgaria	7 May 1934	Ratification with reservations
Chile	2 July 1935	Ratification with reservations
Ethiopia	20 Sept. 1935	Accession[8]
Luxembourg	1 Sept. 1936	Ratification
Czechoslovakia	16 Aug. 1938	Ratification with reservation
Hungary	11 Oct. 1952	Accession
Ceylon	20 Jan. 1954	Accession
Pakistan	13 April 1960	Succession[9]
Tanzania	22 April 1963	Accession

[5] When signing, the British Plenipotentiary declared that his "signature does not bind India or any British Dominion which is a separate Member of the League of Nations and does not separately sign or adhere to the Protocol".

[6] Including Netherlands Indies, Surinam and Curaçao.

[7] This is the date of receipt of the instrument of accession. The date of the French Government's notification "for the purpose of regularization" is 13 January 1969.

[8] The document deposited by Ethiopia, a signer of the Protocol, is registered as an accession. The date given is the date of notification by the French Government.

[9] By a note of the date shown Pakistan informed the French Government that it was a party to the Protocol by virtue of Paragraph 4 of the Annex to the Indian Independence Act of 1947.

Rwanda	21 March 1964	Succession to Belgium
Uganda	24 May 1965	Accession
Cuba	24 June 1966	Accession
Gambia	11 Oct. 1966	Succession to Great Britain
Holy See	18 Oct. 1966	Accession
Cyprus	21 Nov. 1966	Succession to the British Empire
Maldives	19 Dec. 1966	Notification of adherence
Monaco	6 Jan. 1967	Accession
Niger	18 March 1967	Succession to France
Sierra Leone	20 March 1967	Accession
Ghana	3 May 1967	Accession
Tunisia	12 July 1967	Accession
Malagasy Republic	2 Aug. 1967	Accession
Iceland	2 Nov. 1967	Accession
Nigeria	15 Oct. 1968	Accession with reservations
Mongolia	6 Dec. 1968	Accession with reservation
Syria	17 Dec. 1968	Accession with reservation regarding the parties to the Protocol
Israel	20 Feb. 1969	Accession with reservations
Lebanon	17 April 1969	Accession
Nepal	9 May 1969	Accession
Argentina	12 May 1969	Accession
Japan	21 May 1970	Ratification
Kenya	6 July 1970	Accession
Ivory Coast	27 July 1970	Accession
Jamaica	28 July 1970	Succession to United Kingdom
Central African Republic	31 July 1970	Accession
Brazil	28 Aug. 1970	Ratification
Malawi	14 Sept. 1970	Accession
Ecuador	16 Sept. 1970	Accession
Malta	25 Sept. 1970	Succession to United Kingdom
Trinidad and Tobago	9 Oct. 1970	Succession to United Kingdom
Morocco	13 Oct. 1970	Accession
Mauritius	27 Nov. 1970	Succession to United Kingdom
Panama	4 Dec. 1970	Accession
Dominican Republic	8 Dec. 1970	Accession
Malaysia	10 Dec. 1970	Accession
Indonesia	13 Jan. 1971	Succession to the Netherlands
Saudi Arabia	27 Jan. 1971	Accession
Upper Volta	3 March 1971	Accession

Arab Republic of Yemen	17 March 1971	Accession
Togo	5 April 1971	Accession
Tonga	28 July 1971	Accession
Kuwait	15 Dec. 1971	Accession with reservation
Libya	29 Dec. 1971	Accession with reservations
Lesotho	10 Feb. 1972	Succession to United Kingdom

Reservations to the Protocol

Australia

Subject to the reservations that His Majesty is bound by the said Protocol only towards those Powers and States which have both signed and ratified the Protocol or have acceded thereto, and that His Majesty shall cease to be bound by the Protocol towards any Power at enmity with Him whose armed forces, or the armed forces of whose allies, do not respect the Protocol.

Belgium[10]

(1) The said Protocol is only binding on the Belgian Government as regards States which have signed or ratified it or which may accede to it.
(2) The said Protocol shall *ipso facto* cease to be binding on the Belgian Government in regard to any enemy State whose armed forces or whose allies fail to respect the prohibitions laid down in the Protocol.

The British Empire (United Kingdom)[11]

(1) The said Protocol is only binding on His Britannic Majesty as regards those Powers and States which have both signed and ratified the Protocol or have finally acceded thereto. (2) The said Protocol shall cease to be binding on His Britannic Majesty towards any Power at emnity with Him whose armed forces, or the armed forces of whose allies, fail to respect the prohibitions laid down in the Protocol.

Bulgaria

The said Protocol is only binding on the Bulgarian Government as regards States which have signed or ratified it or which may accede to it. The said Protocol shall *ipso facto* cease to be binding on the Bulgarian Govern-

[10] Reservation transmitted to Rwanda, which is a party by virtue of a declaration of succession to Belgium's ratification.
[11] Reservation transmitted to Cyprus, Gambia, Jamaica, Lesotho, Malta, Mauritius and Trinidad and Tobago, all of which are parties to the Protocol by virtue of declarations of succession to the ratification by the British Empire.

ment in regard to any enemy State whose armed forces or whose allies fail to respect the prohibitions laid down in the Protocol.

Canada

(1) The said Protocol is only binding on His Britannic Majesty as regards those States which have both signed and ratified it, or have finally acceded thereto. (2) The said Protocol shall cease to be binding on His Britannic Majesty towards any State at enmity with Him whose armed forces, or whose allies *de jure* or in fact fail to respect the prohibitions laid down in the Protocol.

Chile

(1) The said Protocol is only binding on the Chilean Government as regards States which have signed and ratified it or which may definitely accede to it; (2) The said Protocol shall *ipso facto* cease to be binding on the Chilean Government in regard to any enemy State whose armed forces, or whose allies, fail to respect the prohibitions which are the object of this Protocol.

China

The People's Republic of China considers itself bound by the Protocol on condition of reciprocity on the part of all the other contracting and acceding Powers. (Declaration of 13 July 1952 recognizing as binding the accession to the Protocol in the name of China in 1929.)

Czechoslovakia

The Czechoslovak Republic shall *ipso facto* cease to be bound by this Protocol towards any State whose armed forces, or the armed forces of whose allies, fail to respect the prohibitions laid down in the Protocol.

Estonia

(1) The said Protocol is only binding on the Estonian Government as regards States which have signed or ratified it or which may accede to it. (2) The said Protocol shall *ipso facto* cease to be binding on the Estonian Government in regard to any enemy State whose armed forces or whose allies fail to respect the prohibitions laid down in the Protocol.

France[12]

(1) The said Protocol is only binding on the Government of the French Republic as regards States which have signed or ratified it or which may

[12] Reservation transmitted to Niger which is a party to the Protocol by virtue of a declaration of succession to France's ratification.

accede to it. (2) The said Protocol shall *ipso facto* cease to be binding on the Government of the French Republic in regard to any enemy State whose armed forces or whose allies fail to respect the prohibitions laid down in the Protocol.

India[13]

(1) The said Protocol is only binding on His Britannic Majesty as regards those States which have both signed and ratified it, or have finally acceded thereto. (2) The said Protocol shall cease to be binding on His Britannic Majesty towards any Power at enmity with Him whose armed forces, or the armed forces of whose allies, fail to respect the prohibitions laid down in the Protocol.

Iraq

On condition that the Iraq Government shall be bound by the provisions of the Protocol only towards those States which have both signed and ratified it or have acceded thereto, and that they shall not be bound by the Protocol towards any State at enmity with them, whose armed forces, or the forces of whose allies, do not respect the provisions of the Protocol.

Irish Free State (Ireland)

The Government of the Irish Free State does not intend to assume, by this accession, any obligation except towards the States having signed and ratified this Protocol or which shall have finally acceded thereto, and should the armed forces or the allies of an enemy State fail to respect the said Protocol, the Government of the Irish Free State would cease to be bound by the said Protocol in regard to such State.

Israel

The said Protocol is only binding on the State of Israel as regards States which have signed and ratified or acceded to it. The said Protocol shall cease *ipso facto* to be binding on the State of Israel as regards any enemy State whose armed forces, or the armed forces of whose allies, or the regular or irregular forces, or groups or individuals operating from its territory, fail to respect the prohibitions which are the object of this Protocol.

Kuwait

The accession of the State of Kuwait to this Protocol does not in any way imply recognition of Israel or the establishment of relations with the latter

[13] Reservation applicable to Pakistan as well (cf. note 9).

on the basis of the present Protocol. In case of breach of the prohibition mentioned in this Protocol by any of the Parties, the State of Kuwait will not be bound, with regard to the Party committing the breach, to apply the provisions of this Protocol.

Libya

The accession to the Protocol does not imply recognition or the establishment of any relations with Israel. The present Protocol is binding on the Libyan Arab Republic only as regards States which are effectively bound by it and will cease to be binding on the Libyan Arab Republic as regards States whose forces or whose allies' armed forces fail to respect the prohibitions which are the object of the Protocol.

Mongolia

In the case of violation of this prohibition by any State in relation to the People's Republic of Mongolia or its allies, the Government of the People's Republic of Mongolia shall not consider itself bound by the obligations of the Protocol towards that State.

New Zealand

Same reservations as Australia.

Netherlands[14]

As regards the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices, this Protocol shall *ipso facto* cease to be binding on the Royal Netherlands Government with regard to any enemy State whose armed forces or whose allies fail to respect the prohibitions laid down in the Protocol.

Nigeria

The Protocol is only binding on Nigeria as regards States which are effectively bound by it and shall cease to be binding on Nigeria as regards States whose forces or whose allies' armed forces fail to respect the prohibitions which are the object of the Protocol.

Portugal

(1) The said Protocol is only binding on the Government of the Portuguese Republic as regards States which have signed and ratified it or which may accede to it. (2) The said Protocol shall *ipso facto* cease to be binding on

[14] Reservation transmitted to Indonesia which is a party by virtue of a declaration of succession to the ratification by the Netherlands.

the Government of the Portuguese Republic in regard to any enemy State whose armed forces or whose allies fail to respect the prohibitions which are the object of this Protocol.

Romania

(1) The said Protocol only binds the Romanian Government in relation to States which have signed and ratified or which have definitely acceded to the Protocol; (2) The said Protocol shall cease to be binding on the Romanian Government in regard to all enemy States whose armed forces or whose allies *de jure* or in fact do not respect the restrictions which are the object of this Protocol.

Siam (Thailand)

Declares as binding *ipso facto,* without special agreement with respect to any other Member or State accepting and observing the same obligation, that is to say, on condition of reciprocity, the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous and other Gases and of Bacteriological Methods of Warfare, signed at Geneva, June 17, 1925.

South Africa

Same reservation as Australia.

Spain

Declares as binding *ipso facto,* without special agreement with respect to any other Member or State accepting and observing the same obligation, that is to say, on condition of reciprocity, the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous and other Gases and of Bacteriological Methods of Warfare, signed at Geneva, June 17, 1925.

Syria

The accession by the Syrian Arab Republic to this Protocol and the ratification of the Protocol by its Government does not in any case imply recognition of Israel or lead to the establishment of relations with the latter concerning the provisions laid down in this Protocol.

USSR

(1) The said Protocol only binds the Government of the Union of Soviet Socialist Republics in relation to the States which have signed and ratified or which have definitely acceded to the Protocol. (2) The said Protocol shall cease to be binding on the Government of the Union of Soviet Socialist Republics in regard to any enemy State whose armed forces or whose allies

de jure or in fact do not respect the prohibitions which are the object of this Protocol.

Kingdom of the Serbs, Croats and Slovenes (Yugoslavia)

The said Protocol shall cease to be binding on the Government of the Serbs, Croats and Slovenes in regard to any enemy State whose armed forces or whose allies fail to respect the prohibitions which are the object of this Protocol.

Appendix 3

Selected United Nations General Assembly resolutions on CBW, 1966–1971

Resolution 2162 B (XXI)

Adopted on 5 December 1966 by the General Assembly, by a vote of 91 to none, with four abstentions (Albania, Cuba, France and Gabon):

"*The General Assembly,*

Guided by the principles of the Charter of the United Nations and of international law,

Considering that weapons of mass destruction constitute a danger to all mankind and are incompatible with the accepted norms of civilization,

Affirming that the strict observance of the rules of international law on the conduct of warfare is in the interest of maintaining these standards of civilization,

Recalling that the Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, of June 1925, has been signed and adopted and is recognized by many states,

Noting that the Conference of the Eighteen-Nation Committee on Disarmament has the task of seeking an agreement on the cessation of the development and production of chemical and bacteriological weapons and other weapons from national arsenals, as called for in the draft proposals now before the Conference,

(1) *Calls for* strict observance by all States of the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, and condemns all actions contrary to these objectives;

(2) *Invites* all States to accede to the Geneva Protocol of 17 June 1925."

Resolution 2454 A (XXIII)

Adopted on 20 December 1968 by the General Assembly, by a vote of 107 to none, with two abstentions:

"*The General Assembly,*

Reaffirming the recommendations contained in its resolution 2162 B (XXI) of 5 December 1966 calling for strict observance by all States of the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare signed at Geneva on 17 June 1925, condemning all actions contrary to those objectives and inviting all States to accede to that Protocol,

...

(6) *Reiterates* its call for strict observance by all States of the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare signed at Geneva on 17 June 1925, and invites all States to accede to that Protocol."

Resolution 2603 A (XXIV)

Adopted on 16 December 1969 by the General Assembly, by a vote of 80 to 3 with 36 abstentions:

"*The General Assembly,*

Considering that chemical and biological methods of warfare have always been viewed with horror and have been justly condemned by the international community,

Considering that these methods of warfare are inherently reprehensible, because their effects are often uncontrollable and unpredictable and may be injurious without distinction to combatants and non-combatants and because any use would entail a serious risk of escalation,

Recalling that successive international instruments have prohibited or sought to prevent the use of such methods of warfare,

Noting specifically in this regard:

(a) That the majority of States then in existence adhered to the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925,

(b) That since then further States have become Parties to that Protocol,

(c) That yet other States have declared that they will abide by its principles and objectives,

(d) That these principles and objectives have commanded broad respect in the practice of States,

(e) That the General Assembly, without any dissenting vote, has called

for the strict observance by all States of the principles and objectives of the Geneva Protocol,

Recognizing therefore, in the light of all the above circumstances, that the Geneva Protocol embodies the generally recognized rules of international law prohibiting the use in international armed conflicts of all biological and chemical methods of warfare, regardless of any technical developments,

Mindful of the report of the Group of Experts, appointed by the Secretary-General of the United Nations under General Assembly resolution 2454 A (XXIII) of 20 December 1968, on chemical and bacteriological (biological) weapons and the effects of their possible use,

Considering that this report and the foreword to it by the Secretary-General add further urgency for an affirmation of these rules and for dispelling for the future, any uncertainty as to their scope and, by such affirmation, assure the effectiveness of the rules and enable all States to demonstrate their determination to comply with them,

Declares as contrary to the generally recognized rules of international law, as embodied in the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, the use in international armed conflicts of:

(a) Any chemical agents of warfare—chemical substances, whether gaseous, liquid or solid—which might be employed because of their direct toxic effects on man, animals or plants;

(b) Any biological agents of warfare—living organisms, whatever their nature, or infective material derived from them—which are intended to cause disease or death in man, animals or plants, and which depend for their effects on their ability to multiply in the person, animal or plant attacked."

Voting record

(Italicized entries are those countries which were parties to the Geneva Protocol at the time of voting.)

In favour:

Afghanistan, Algeria, *Argentina,* Brazil, *Bulgaria,* Burma, Burundi, *Byelorussian Soviet Socialist Republic,* Cameroon, Central African Republic, *Ceylon,* Chad, Colombia, Congo (Brazzaville), Congo (Democratic Republic), Costa Rica, *Cuba, Cyprus, Czechoslovakia,* Dahomey, Dominican Republic, Ecuador, Equatorial Guinea, *Ethiopia, Finland,* Gabon, *Ghana,* Guatemala, Guinea, Guyana, Haiti, Honduras, *Hungary,*

India, Indonesia, *Iran, Iraq, Ireland,* Ivory Coast, Jamaica, Jordan, Kenya, Kuwait, *Lebanon,* Lesotho, Libya, *Maldives,* Mali, Mauritania, Mauritius, *Mexico, Mongolia,* Morocco, *Nepal, Niger, Nigeria, Pakistan,* Panama, Peru, *Poland, Romania, Rwanda,* Saudi Arabia, Senegal, Somalia, Southern Yemen, *Spain,* Sudan, *Sweden, Syria,* Togo, Trinidad and Tobago, *Uganda, Ukrainian Soviet Socialist Republic, Union of Soviet Socialist Republics, United Arab Republic, United Republic of Tanzania,* Upper Volta, Yemen, *Yugoslavia.*

Against:

Australia, Portugal, United States of America.

Abstaining:

Austria, Belgium, Bolivia, *Canada, Chile, China (Taiwan), Denmark,* El Salvador, *France, Greece, Iceland, Israel, Italy,* Japan, Laos, *Liberia, Luxembourg, Madagascar,* Malawi, Malaysia, *Netherlands, New Zealand,* Nicaragua, *Norway, Paraguay,* Philippines, *Sierra Leone,* Singapore, *South Africa,* Swaziland, *Thailand, Tunisia, Turkey, United Kingdom of Great Britain and Northern Ireland,* Uruguay, *Venezuela.*

Absent:

Albania, Barbados, Botswana, Cambodia, *Gambia,* Malta, Zambia.

Resolution 2603 B (XXIV)

Adopted on 16 December 1969 by the General Assembly, by a vote of 120 to none, with one abstention:

"*The General Assembly,*

Recalling its resolution 2454 A (XXIII) of 20 December 1968,

. . .

Recognizing the importance of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva, on 17 June 1925,

Conscious of the need to maintain inviolate the Geneva Protocol and to ensure its universal applicability,

. . .

(1) *Reaffirms* its resolution 2162 B (XXI) of 5 December 1966 and calls anew for strict observance by all States of the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925;

(2) *Invites* all States which have not yet done so to accede to or ratify the Geneva Protocol in the course of 1970 in commemoration of the forty-fifth anniversary of its signing and the twenty-fifth anniversary of the United Nations;

. . ."

Resolution 2662 (XXV)

Adopted on 7 December 1970 by the General Assembly, by a vote of 113 to none, with two abstentions:

"*The General Assembly,*

. . .

Recalling its resolution 2454 A (XXIII) of 20 December 1968 and 2603 B (XXIV) of 16 December 1969,

. . .

Conscious of the need to maintain inviolate the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, and to ensure its universal applicability,

Conscious of the urgent need for all States that have not already done so to accede to the Geneva Protocol of 1925,

1. *Reaffirms* its resolution 2162 B (XXI) of 5 December 1966 and calls anew for the strict observance by all States of the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925;

2. *Invites* all States that have not already done so to accede to or ratify the Geneva Protocol;

. . ."

Resolution 2677 (XXV)

Adopted on 9 December 1970 by the General Assembly, by a vote of 111 to none, with 4 abstentions:

"*The General Assembly,*

. . .

Convinced of the continuing value of existing humanitarian rules relating to armed conflicts, and in particular the Hague Conventions of 1899 and 1907, the Geneva Protocol of 1925 and the Geneva Conventions of 1949,

1. *Calls upon* all parties to any armed conflict to observe the rules laid down in the Hague Conventions of 1899 and 1907, the Geneva Protocol of 1925, the Geneva Conventions of 1949 and other humanitarian rules applicable in armed conflicts, and invites those States which have not yet done so to adhere to those Conventions;

..."

Resolution 2827 A (XXVI)

Adopted on 16 December 1971 by the General Assembly by a vote of 110 to none, with 1 abstention (France):

"*The General Assembly,*

...

5. *Reaffirms* its resolution 2162 B (XXI) of 5 December 1966 and calls anew for the strict observance by all States of the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous and Other Gases, and of Bacteriological Methods of Warfare;

6. *Invites* all States that have not already done so to accede to or ratify the Protocol;

..."

Appendix 4

Convention on the prohibition of the development, production and stockpiling of bacteriological (biological) and toxin weapons and on their destruction

The States Parties to this Convention,

Determined to act with a view to achieving effective progress towards general and complete disarmament, including the prohibition and elimination of all types of weapons of mass destruction, and convinced that the prohibition of the development, production and stockpiling of chemical and bacteriological (biological) weapons and their elimination, through effective measures, will facilitate the achievement of general and complete disarmament under strict and effective international control,

Recognizing the important significance of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, and conscious also of the contribution which the said Protocol has already made, and continues to make, to mitigating the horrors of war,

Reaffirming their adherence to the principles and objectives of that Protocol and calling upon all States to comply with them,

Recalling that the General Assembly of the United Nations has repeatedly condemned all actions contrary to the principles and objectives of the Geneva Protocol of 17 June 1925,

Desiring to contribute to the strengthening of confidence between peoples and the general improvement of the international atmosphere,

Desiring also to contribute to the realization of the purposes and principles of the Charter of the United Nations,

Convinced of the importance and urgency of eliminating from the arsenals of States, through effective measures, such dangerous weapons of mass destruction as those using chemical or bacteriological (biological) agents,

Recognizing that an agreement on the prohibition of bacteriological (biological) and toxin weapons represents a first possible step towards the achievement of agreement on effective measures also for prohibition of the

development, production and stockpiling of chemical weapons, and determined to continue negotiations to that end,

Determined, for the sake of all mankind, to exclude completely the possibility of bacteriological (biological) agents and toxins being used as weapons,

Convinced that such use would be repugnant to the conscience of mankind and that no effort should be spared to minimize this risk,

Have agreed as follows:

ARTICLE I

Each State Party to this Convention undertakes never in any circumstances to develop, produce, stockpile or otherwise acquire or retain:

(*a*) Microbial or other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes;

(*b*) Weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict.

ARTICLE II

Each State Party to this Convention undertakes to destroy, or to divert to peaceful purposes, as soon as possible but not later than nine months after the entry into force of the Convention, all agents, toxins, weapons, equipment and means of delivery specified in Article I of the Convention, which are in its possession or under its jurisdiction or control. In implementing the provisions of this article all necessary safety precautions shall be observed to protect populations and the environment.

ARTICLE III

Each State Party to this Convention undertakes not to transfer to any recipient whatsoever, directly or indirectly, and not in any way to assist, encourage, or induce any State, group of States or international organizations to manufacture or otherwise acquire any of the agents, toxins, weapons, equipment or means of delivery specified in Article I of the Convention.

ARTICLE IV

Each State Party to this Convention shall, in accordance with its constitutional processes, take any necessary measures to prohibit and prevent development, production, stockpiling, acquisition or retention of the agents, toxins, weapons, equipment and means of delivery specified in Article I of the Convention, within the territory of such State, under its jurisdiction or under its control anywhere.

ARTICLE V

The States Parties to this Convention undertake to consult one another and to co-operate in solving any problems which may arise in relation to the objective of, or in the application of the provisions of, this Convention. Consultations and co-operation pursuant to this article may also be undertaken through appropriate international procedures within the framework of the United Nations and in accordance with its Charter.

ARTICLE VI

1. Any State Party to this Convention which finds that any other State Party is acting in breach of obligations deriving from the provisions of this Convention may lodge a complaint with the Security Council of the United Nations. Such a complaint should include all possible evidence confirming its validity as well as a request for its consideration by the Security Council.

2. Each State Party to this Convention undertakes to co-operate in carrying out any investigation which the Security Council may initiate, in accordance with the provisions of the Charter of the United Nations, on the basis of the complaint received by the Council. The Security Council shall inform the States Parties to the Convention of the results of the investigation.

ARTICLE VII

Each State Party to this Convention undertakes to provide or support assistance, in accordance with the Charter of the United Nations, to any Party to the Convention which so requests, if the Security Council decides that such Party has been exposed to danger as a result of violation of this Convention.

ARTICLE VIII

Nothing in this Convention shall be interpreted as in any way limiting or detracting from the obligations assumed by any State under the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925.

ARTICLE IX

Each State Party to this Convention affirms the recognized objective of effective prohibition of chemical weapons and, to this end, undertakes to continue negotiations in good faith with a view to reaching early agreement on effective measures for the prohibition of their development, production and stockpiling and for their destruction, and on appropriate meas-

ures concerning equipment and means of delivery specifically designed for the production or use of chemical agents for weapons purposes.

ARTICLE X

1. The States Parties to this Convention undertake to facilitate and have the right to participate in the fullest possible exchange of equipment, materials and scientific and technological information for the use of bacteriological (biological) agents and toxins for peaceful purposes. Parties to this Convention in a position to do so shall also co-operate in contributing individually or together with other States or international organizations to this further development and application of scientific discoveries in the field of bacteriology (biology) for prevention of disease, or for other peaceful purposes.

2. This Convention shall be implemented in a manner designed to avoid hampering the economic or technological development of States Parties to the Convention or international co-operation in the field of peaceful bacteriological (biological) activities, including the international exchange of bacteriological (biological) agents and toxins and equipment for the processing, use or production of bacteriological (biological) agents and toxins for peaceful purposes in accordance with the provisions of this Convention.

ARTICLE XI

Any State Party may propose amendments to this Convention. Amendments shall enter into force for each State Party accepting the amendments upon their acceptance by a majority of the States Parties to this Convention and thereafter for each remaining State Party on the date of acceptance by it.

ARTICLE XII

Five years after the entry into force of this Convention, or earlier if it is requested by a majority of Parties to the Convention by submitting a proposal to this effect to the Depositary Governments, a conference of States Parties to the Convention shall be held at Geneva, Switzerland, to review the operation of this Convention, with a view to assuring that the purposes of the preamble and the provisions of the Convention, including the provisions concerning negotiations on chemical weapons, are being realized. Such review shall take into account any new scientific and technological developments relevant to this Convention.

ARTICLE XIII

1. This Convention shall be of unlimited duration.

2. Each State Party to this Convention shall, in exercising its national

sovereignty, have the right to withdraw from the Convention if it decides that extraordinary events, related to the subject matter of this Convention, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other States Parties to the Convention and to the United Nations Security Council three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

ARTICLE XIV

1. This Convention shall be open to all States for signature. Any State which does not sign the Convention before its entry into force in accordance with paragraph 3 of this article may accede to it at any time.

2. This Convention shall be subject to ratification by signatory States. Instruments of ratification and instruments of accession shall be deposited with the Governments of the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America, which are hereby designated the Depositary Governments.

3. This Convention shall enter into force after the deposit of the instruments of ratification by twenty-two Governments, including the Governments designated as Depositaries of the Convention.

4. For States whose instruments of ratification or accession are deposited subsequent to the entry into force of this Convention, it shall enter into force on the date of the deposit of their instruments of ratification or accession.

5. The Depositary Governments shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each instrument of ratification or of accession and the date of the entry into force of this Convention, and of the receipt of other notices.

6. This Convention shall be registered by the Depositary Governments pursuant to Article 102 of the Charter of the United Nations.

ARTICLE XV

This Convention, the Chinese, English, French, Russian and Spanish texts of which are equally authentic, shall be deposited in the archives of the Depositary Governments. Duly certified copies of this Convention shall be transmitted by the Depositary Governments to the Governments of the signatory and acceding States.

In witness whereof the undersigned, duly authorized, have signed this Convention.

Signed in London, Moscow and/or Washington on 10 April 1972 by Afghanistan, Australia, Austria, Belgium, Bolivia, Botswana, Brazil, Bulgaria, Burma, Burundi, Byelorussia, Canada, Ceylon, Chile, Republic of China (Taiwan), Colombia, Central African Republic, Costa Rica, Cyprus, Czechoslovakia, Dahomey, Denmark, Dominican Republic, Egypt, El Salvador, Ethiopia, Finland, Gabon, Federal Republic of Germany, German Democratic Republic, Ghana, Greece, Haiti, Honduras, Hungary, Iceland, Iran, Ireland, Italy, Japan, Jordan, Khmer Republic, Republic of Korea, Laos, Lebanon, Lesotho, Liberia, Luxembourg, Malawi, Malaysia, Mali, Mauritius, Mexico, Mongolia, Nepal, Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Peru, Philippines, Poland, Romania, Rwanda, Senegal, South Africa, Spain, Switzerland, Togo, Tunisia, Turkey, Ukraine, Union of Soviet Socialist Republics, United Kingdom, United States of America, Venezuela, Republic of Vietnam, Yemen Arab Republic, Yugoslavia, Zaïre, *and subsequently by*

Saudi Arabia (12 April), Kuwait and Syria (14 April), People's Democratic Republic of Yemen (17 April), Niger (21 April), Morocco and Panama (2 May), Guatemala (9 May), Ivory Coast (23 May), Ecuador (14 June), Singapore (19 June), Indonesia (21 June), Somali Democratic Republic (3 July) and Federal Republic of Nigeria (10 July 1972).

Appendix 5

French law prohibiting the development, production, retention, stockpiling, acquisition or transfer of biological and toxin weapons

Law no. 72–467, promulgated on 9 June 1972

ARTICLE I

The development, production, retention, stockpiling, acquisition or transfer of microbial or other biological agents or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes shall be prohibited.

ARTICLE II

To induce or assist in any way any State, undertaking, organisation, group or person to engage in the operations specified in Article I shall be prohibited.

ARTICLE III

In cases where criminal proceedings have been instituted in pursuance of the provisions of the foregoing Articles, the investigating magistrate may make an interim injunction for the total or partial closure of the establishment where any of the agents or toxins specified in Article I have been developed, produced, retained or stockpiled.

ARTICLE IV

Offences against the provisions of Articles I and II shall be punished by one to five years' imprisonment and by a fine of 5 000 F to 500 000 F or by one of these penalties only.

In case of conviction the court shall demand the confiscation with a view to their destruction, of the agents or toxins specified in Article I.

It may in addition demand, together or separately: temporary or permanent, total or partial closure of the establishment where any of these agents or toxins have been developed, produced, retained or stockpiled;

The confiscation of equipment used for the development, production, retention or stockpiling of these agents or toxins.

It may also prohibit the person convicted from practising, for a period not exceeding five years, the profession under cover of which the offence was committed.

ARTICLE V

Offences against the provisions of judgements implementing the rules laid down in the third and fourth paragraphs of the preceding Article shall be subject to the penalties specified in the first paragraph of that Article.

They may demand access to any document or take any sample relating to the operations prohibited by this law.

ARTICLE VI

Offences against the provisions of this Law shall be investigated by officers of the *police judiciaire* (Criminal Investigation Department) and by officials who shall be specially empowered for that purpose on conditions to be laid down by the decree provided for in Article IX.

ARTICLE VII

The persons specified in the preceding Article shall have access to the establishments to which this Law applies at any time in order to make such enquiries as they may deem necessary.

ARTICLE VIII

Any obstruction against the performance of their functions by the persons specified in Article VI shall be punished by from two months' to one year's imprisonment and by a fine of 2 000 F to 50 000 F or by one of these penalties only.

ARTICLE IX

A decree by the Council of State shall determine the measures for implementing this Law which shall be applicable in the Overseas Territories.

References

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