

Weapons and laws of war

The Problem of Chemical and Biological Warfare. Vol 2: CB Weapons Today; vol. 3: CBW and the Law of War. Stockholm International Peace Research Institute. Vol 2: Pp. 420; vol. 3: pp. 194. (A study of the Historical, Technical, Military, Legal and Political Aspects of CBW, and Possible Disarmament Measures.) (Almqvist and Wiksell: Stockholm; Humanities: New York; Elek: London, 1973.) Vol. 2: Sw.kr.75; \$16.50; £7.50; vol. 3: Sw.kr. 40; \$10; £5.

THESE two latest volumes in the SIPRI series maintain the scholarly distinction and absorbing interest of their predecessors (volumes 1, 4 and 5, published in 1971, were reviewed in *Nature*, 236, 355; 1972.) Volume 2 now takes the historical survey of CB Weapons, defences, policies and programmes beyond 1945 where volume 1 left off. It brings together in a masterly way the available information on contemporary CBW technology and examines as far as is known the policies of each state towards the use of CBW, including tables indicating continent by continent states' formal attitude towards the 1925 Geneva Protocol and the 1972 Convention on Biological and Toxin Weapons, which is not yet in force.

This volume, written by Julian Perry Robinson, with the assistance of Carl-Göran Hedén and Hans von Schreeb, is essentially a work of information, endowed with more than 1,600 references in addition to footnotes. Special attention is paid, as one would expect in a SIPRI publication, to the importance of research and development programmes and the relationships thus engendered between the military and scientific communities (pages 325–332). Specific R and D programmes, such as that concerned with 'binaries', are also described.

Volume 3, written by the Danish peace researcher Anders Boserup, addresses itself to the question: what does international law, and specifically the international law of war, have to say about CBW? One might think this a straightforward question, the answer to which could scarcely deserve a volume to itself: a question in any case less interesting than whether the law is 'strong' enough, and if not what can be done to strengthen it, subjects on which SIPRI had already had much to say in volume 5. One might therefore expect volume 3, being "only concerned with the legal issues in the narrow positivist sense of determining what the law says" (page 42), to be uncontroversial to the point of boredom.

Not so. For there happens to be considerable disagreement over the state of the law. Most of the responsibility for the present uncertainty must

be laid at the door of those governments which have made it their business to discover and exploit supposed ambiguities in the Versailles Treaty formula for defining chemical weapons. This 1919 formula—"asphyxiating, poisonous or other gases and all analogous liquids, materials or devices"—was also embodied in the Washington Treaty of 1922, which did not enter into force, and the Geneva Protocol of 1925, which did. More than 90 states are now parties to the protocol.

What is agreed is that there exists a legal prohibition on the use of chemical weapons and biological methods of warfare. But is the chemical ban as absolute as the biological? Is the content of the prohibition in customary international law more extensive than the treaty prohibition binding only parties to the Geneva Protocol? Is retaliatory use of CBW as firmly banned as first use? And what is the legal effect of the reservations made by many states, including Britain, upon ratifying the protocol, reserving the right to employ CBW against not only the state which violates the protocol but equally against that state's allies?

The SIPRI study examines these and other questions but deals most fully with two matters of bitter controversy: harassing agents (gases such as CN and CS) and chemical herbicides. The controversy is first resolved, systematically, into four questions: (1) Is the use in war of harassing agents prohibited, on condition of reciprocity, among parties to the Geneva Protocol? (2) Is the use in war of herbicides likewise prohibited under the protocol? (3) Is the use in war of harassing agents prohibited nowadays by a peremptory norm (*jus cogens*) of customary international law, binding (by definition) on all states irrespective of their attitude to the protocol? (4) Is the use in war of herbicides likewise prohibited by a peremptory norm?

SIPRI's treatment of these four key questions is thorough, well informed and tightly argued. In the end we find that the answer given to each of the four is yes, although it is admitted (pages 137–8) that (4), the customary prohibition of herbicides, is less conclusively proved than the first three. This is partly because *jus cogens* is a vague concept, with no such precise apparatus of proof as the rules of treaty interpretation provide; partly because evidence of state practice and belief is relatively slender.

So SIPRI settles for the most extensive view of the state of the law, incidentally supporting U Thant and the United Nations General Assembly in the views which they separately expressed in 1969 and from which few states other than the United States

have ever deviated. Some of the restrictive interpretations suggested seem to have been based on misunderstandings or ignorance of international law, whereas of others the kindest thing that can be said is that they "can only arise from a highly specious reading of the Protocol" (page 43). Both comments apply in full measure to the notorious British policy statement purporting to exclude CS gas from the scope of the protocol: a policy as legally untenable (and unnecessary) now as when it was first announced in 1970. SIPRI once again condemns the British statement (pages 59–62) but, as in previous volumes of this study, attributes it to improbable causes, overlooking the clues contained in its very ineptitude of expression.

In conclusion this volume can be warmly commended, but with two qualifications. Its author did not have time to take adequate account of the implications of states' signature and ratification of the 1972 convention. Indeed, the reference (page 149) to this partial disarmament treaty is marred by a faulty argument regarding the significance of the withdrawal clause which assumes, mistakenly, that use of BW and toxins was among the activities banned by the convention. (It should have been; but on that point Britain was obliged, by Sweden and the East European states, to give way in the autumn 1971 round of negotiations, so that the Convention ended up with no ban on use as such). Less excusable on grounds of time is the failure (pages 62–3) to distinguish between interpretations of the Geneva Protocol and statements of intent for future CW agreements. The 1970–71 policy declarations of Canada, Norway and the Netherlands were clearly of the second type and should not have been adduced as evidence supporting the extensive interpretation of the protocol.

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Geochemistry handbook

Handbook of Geochemistry Vol. 2/3. K. H. Wedepohl (executive editor) and C. W. Correns, D. M. Shaw, K. K. Turekian and J. Zemmann (editorial board). Pp. iv+845. (Springer-Verlag: Berlin and New York, 1974.) DM 258; \$99.40.

THE *Handbook of Geochemistry* has been taken a further substantial step towards completion with the publication of this section. Chapters for sixteen new elements are introduced; of these only that for barium is supplied in entirety, although substantial parts of the chapters on nitrogen, fluorine, gallium, selenium, indium, tellurium and thallium are also provided. Eleven