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PREVENTING THE HOSTILE USE OF BIOTECHNOLOGY: THE WAY FORWARD NOW

Two months before the scheduled resumption of the Fifth BWC Review Conference, the United States let it be known that it favours "a very short Rev Con, if any...with the sole purpose and outcome of agreeing to hold a Rev Con in 2006". Should that view prevail when the states parties assemble in Geneva in November, there could be little serious attempt to strengthen the BWC regime for a further four years. At the same time, the International Committee of the Red Cross (ICRC) launched an appeal titled *Biotechnology, Weapons and Humanity*, in which it warned of the growing dangers to humanity from the possible hostile use of biotechnology and urged that strenuous efforts be made to prevent such a menace.

It is important to understand the basis of the ICRC's concerns. As has been noted previously in this *Bulletin*, all major technologies have in the past been applied for both peaceful and hostile purposes. If effective action is not taken, the same thing will surely happen to biotechnology. Should this be allowed to occur, the very nature of human conflict could begin to change, as biotechnology comes to be exploited not only to produce weapons that are lethal but also ones designed to affect cognition, behaviour, development and perhaps even inheritance — for hostile purposes. That would indeed be a 'brave new world' to bequeath to future generations.

In deciding where to place our priorities in order to prevent any drift toward such an inimical outcome we have to be realistic about where the principal long-term hazards of biotechnology lie and where they do not. Much concern has been expressed recently over the possible hazards of peaceful research (for example, in regard to the mousepox experiment in Australia), but it is most unlikely that a monster plague could accidentally result from such activities. The further development and application of workable guidelines and peer review of certain sorts of peaceful research are prudent measures but must not distract us from the necessity of dealing with the far greater menace of deliberate use of pathogens, existing or yet to be developed.

More effective surveillance and cooperation between national law enforcement authorities, for example, can help to foil those who may seek to acquire pathogens as weapons of terror. But history shows that it was in the major state-level offensive biological weapons programmes of the Twentieth Century — especially in the UK, the USA and the USSR — that there was the most technologically advanced and most massive preparation for the use of biological weapons. Preventing such state-level offensive programmes in the future should be a primary concern.

A second major cause of concern should be the proliferation of secret, offensively oriented, biological defence programmes such as have recently come into being in the United States. Elements of this programme clearly go well beyond the limits for defensive research set by President Ford and promulgated within the government by the Scowcroft Memorandum of 23 December 1975 (reproduced over the page), after President Nixon closed down the US offensive programme. There is a grave danger that secret, offensively oriented, defence programmes will acquire a momentum of their own, proliferating and eventually becoming offensive programmes.

A third principal cause of concern must be the ongoing development, within military establishments in the developed countries, most notably the US, of new weapons based on biochemical incapacitants, for example, those acting on the central nervous system. Although such agents are prohibited by the BWC and the CWC for any but peaceful purposes, some persons have advanced specious claims to the contrary, arguing that the use of such agents might be permissible in certain paramilitary operations. This view flouts international treaty commitments and fails to appreciate the hazard that any hostile use of biological or chemical agents, especially by a major state, by breaching the prevailing norm risks eroding that norm altogether.

The international community has numerous means of discouraging the hostile use of biotechnology in the Twenty-first Century. But we must not let pursuit of useful but less effective measures distract us from the need to take more effective ones. Better disease surveillance, for example, if backed up with appropriate medical and public health measures, is greatly needed for its own sake, and it may also assist in distinguishing a natural from an unnatural outbreak of disease. Yet it must be remembered that only at

Sverdlovsk was there a detected unnatural outbreak during the whole of the Soviet and Western offensive programmes. Similarly, better articulated codes of professional conduct are to be welcomed as supportive instruments, but even if 99 per cent of the world's biologists conform to stringent new codes, one per cent employed in major state-level offensive biological weapons programmes could still produce the havoc we wish to avoid. Moreover, excessive regulation piled onto the scientific community could stifle the very beneficial advances we all wish to see.

The fact of the matter is that multilateral international agreements designed to implement the BWC regime effectively will be needed to deal with the main problem of precluding major state-level offensive biological weapons programmes. In order to be effective, these agreements must include a system of declarations, visits to declared sites and challenge inspections. This will not, in itself, prevent every potential violation, but it will make prohibited activities more difficult and more risky to any who undertake them. And it will give the international community the unity and political will needed to suppress violations, should they occur. In addition, the BWC regime should be strengthened by the addition of agreed sanctions. A promising approach here, one that could be adopted by like-minded states even before a verification regime for BWC can be established, would be the elaboration and implementation of a treaty to criminalize biological and chemical armament in international law. Modelled on treaties applicable to aircraft hijacking, for example, and torture, this one would provide the courts of its member states with criminal jurisdiction over anyone on their territory, regardless of their nationality or official position, who orders or knowingly gives substantial support to the development, production, transfer or use of chemical or biological weapons anywhere. A draft of such a treaty, prepared by the Harvard Sussex Program with advice from international legal authorities is available on the HSP web site at www.fas.harvard.edu/~hsp/crim01.pdf

So whilst we pursue other necessary avenues, such as the development of better professional standards to avoid inadvertently dangerous research, we must not become distracted from the main goal. The BWC regime has to be strengthened and effectively implemented as soon as possible, whatever the prevailing winds in Washington. The world was a better place for the 1925 Geneva Protocol despite Washington taking 50 years to ratify it. Indeed, the pursuit of other goals to the detriment of the strengthening of the BWC would be counter-productive rather than just a distraction from what is really required to prevent the hostile use of biology.