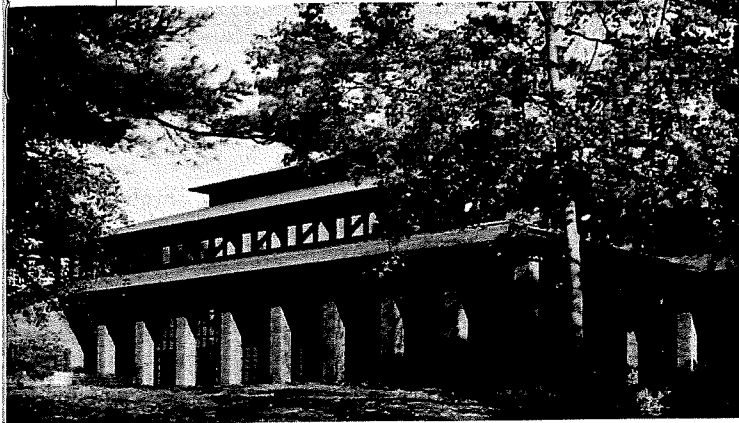


Bulletin

Winter 2001
Vol. LIV, No. 2



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Inductees Abner Mikva (University of Chicago Law School) and Barbara Goldsmith (Barbara Goldsmith Productions) greet Matthew Meselson (Harvard University).

developmental psychologists, demographers, statisticians, historians, cultural anthropologists, public health workers, and others to complement the expertise of scholars and practitioners who already work in education.

We welcome your thoughts on our efforts.

International Criminalization of Chemical and Biological Weapons

Matthew Meselson

The American Academy has a long-standing interest in arms control and international security studies, dating back to the late 1950s with the formation of the US Committee on the Pugwash Conference on Science and World Affairs and the establishment in 1982 of the Academy's Committee on International Security Studies. As a biologist seeking the effective elimination of biological and chemical weapons and concerned with the need to avert the exploitation of biotechnology for hostile purposes, I have been a participant in these Academy efforts over the years and, most recently,

in the development of an important study at the interface of international law and arms control.

There is a body of international criminal law that seeks to provide national courts with "universal jurisdiction" over certain crimes. We saw an example of this last year, when the United Kingdom, by decision of its Law Lords, asserted jurisdiction with respect to the request of Spain for extradition of Augusto Pinochet, even though Pinochet is not a national of the UK and was not accused of any crime committed on its territory. The legal basis for that decision was the 1984 International Convention Against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment. The Torture Convention was enacted into British law and ratified by the United Kingdom in 1988. It is one of several international treaties that seek to provide national courts with jurisdiction over certain crimes that are particularly dangerous or abhorrent to all—regardless of the nationality of the accused or the place where the alleged crime was committed. Persons committing such crimes are regarded as *hostes humani generis*, enemies of all humanity.

Since the nineteenth century, universal jurisdiction has been exercised by states over the international crimes of piracy and slave trading. After World War II, treaties were concluded and entered into force seeking to establish universal jurisdiction over airline hijacking and sabotage (1970 and 1971), crimes against internationally protected persons (1973), hostage taking (1979), theft of nuclear materials (1980), torture (1984), and crimes against maritime navigation (1988). The United States has ratified all of these treaties.

With these treaties as background, it occurred to my colleague Julian Robinson at the University of Sussex and to me that international criminal law might be brought to bear on individuals who knowingly develop, produce, transfer, or use biological or chemical weapons or who order or direct anyone to engage in these activities. Prohibitions against the hostile use of poison and disease go back to Hindu, Roman, Koranic, and old

European law—to times long before infectious agents were recognized as being different from poisonous ones. The ancient prohibition is expressed in and bolstered by modern international treaties, including the Geneva Protocol of 1925, the Biological Weapons Convention (BWC) of 1972, and the Chemical Weapons Convention (CWC) of 1993.

The BWC and the CWC define what is prohibited in an interesting manner. The definitions could not take the simple form of lists of infectious agents or chemicals, because many of these agents and materials have peaceful uses as well as potentially hostile ones. As an example of this dual-use problem, phosgene was widely used as a weapon in World War I but is important for the manufacture of plastics and other useful materials.

A second problem of definition arises from the fact that new chemicals and infectious agents are constantly being discovered; even a never-ending diplomatic conference could not keep the list up to date. To deal with the problems of dual use and innovation, the framers of the BWC and the CWC devised a practical and durable definition of what is prohibited, known as the General Purpose Criterion. The criterion is based on purpose. In the case of the CWC, for example, all toxic chemicals and their precursors are prohibited “except when intended for purposes not prohibited under this convention, as long as the types and quantities are consistent with such purposes.” The CWC then goes on to define the purposes that are not prohibited as “industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes” and certain other purposes specified in the convention. A similar definition of what is prohibited appears in the BWC. With the General Purpose Criterion as the guiding principle, even future developments in biology and chemistry are covered by the existing treaties.

Now that the biological and chemical conventions are in force for the great majority of states, the way may be open for the creation of a new treaty that would embody the prohibitions of the BWC and

the CWC and the General Purpose Criterion on which they are based into international criminal law, applicable to individuals. After preparing an initial draft modeled on treaties like the 1984 Torture Convention and other treaties that seek to establish universal jurisdiction over certain crimes, we sought the participation and advice of a distinguished group of legal authorities, including Professor Philip Heymann of the Harvard Law School, and held a number of workshops in the United States and in the United Kingdom, resulting in a Draft Convention on the Prevention and Punishment of the Crime of Developing, Producing, Acquiring, Stockpiling, Retaining, Transferring, or Using Biological or Chemical Weapons. The draft convention would make it an offense for any person, regardless of official position, to order, to direct, or knowingly to participate or render substantial assistance in the development, production, acquisition, or use of biological or chemical weapons. Persons who commit such offenses would risk trial or extradition if found in the territory of any state that supports the convention.

To move forward with this endeavor, it is necessary that a state or a group of states submit the proposed convention or a similar draft in the form of a resolution for consideration by the United Nations General Assembly, seeking referral of the draft to the UNGA Sixth (legal) Committee for negotiation of an agreed text. Following commendation of the negotiated text by the General Assembly, the convention could be opened for signature and ratification, leading to its entry into force after a specified number of states had become parties.

If we ask what has been the fate of every major technology in the history of our species—metallurgy, internal combustion, explosives, aviation, electronics, nucleonics, computers—we realize that all of them have been exploited for both peaceful and hostile purposes. What will happen if biotechnology, certain to be a dominant technology of the twenty-first century, comes to be vigorously exploited for hostile purposes? Biotechnology is

significantly different from other technologies: it can change what it means to be human. As biotechnology advances, it will become possible to manipulate all of the life processes, including cognition, development, reproduction, and inheritance. The draft convention I have outlined would build on the widespread cross-cultural aversion to the hostile use of poison and disease and would reinforce the existing conventions that are applicable primarily to states—by making the development, production, and use of biological and chemical weapons an international crime.

Adoption of such a convention would create a new dimension of constraint against biological and chemical weapons by applying international criminal law to hold individual offenders responsible and punishable. The norm against biological and chemical weapons would be strengthened; deterrence of potential offenders, both official and unofficial, would be enhanced; and international cooperation in suppressing the prohibited activities would be facilitated.

Let me close by saying that what has been critical in the activities of the American Academy in the area of international security and arms control is the opportunity to bring together natural and social scientists, historians, and other scholars and representatives of governmental and nongovernmental organizations to share ideas and to expand and enrich the perspectives of everyone involved. As the other speakers have indicated, the Academy provides a stimulating and supportive environment for such enterprises.

INDUCTION CEREMONY

At the evening ceremony, each of the 110 newly elected Fellows and Foreign Honorary Members in attendance was congratulated by the officers of the Academy and invited to sign the Members' Book. In response, representatives of each of the Academy's five classes provided their perspectives on critical issues confronting the intellectual community and the Academy in the twenty-first century: Class I (Mathematical and Physical

Sciences), **Wendy Freedman** of the Carnegie Institution of Washington, Pasadena; Class II (Biological Sciences), **Hal Caswell** of Woods Hole Oceanographic Institution; Class III (Social Sciences), **Harold Hongju Koh** of the US Department of State, Division of Democracy, Human Rights, and Labor; Class IV (Humanities and Arts), author **Allan Gurganus** of Hillsborough, NC; and Class V (Public Affairs, Business, and Administration), **Gordon Conway** of the Rockefeller Foundation. Their remarks follow.

Wendy L. Freedman: We have just crossed over the threshold into the twenty-first century, making this a propitious moment to recall what we knew about our universe at the beginning of the twentieth century. The discoveries made over the past century have been dramatic, and they have revolutionized our perception of the universe in which we live.

At the outset of the twentieth century, we inherited the then 350-year-old, initially blasphemous Copernican idea of a Sun-centered (rather than Earth-centered) universe. Eight planets were then known to orbit our Sun. A controversy arose as to whether the collection of stars in our own Milky



Vice President Patricia Albjerg Graham (center) with class speakers Allan Gurganus (Hillsborough, North Carolina), Harold Hongju Koh (US Department of State), Wendy Freedman (Carnegie Institution of Washington, Pasadena) and Hal Caswell (Woods Hole Oceanographic Institution). Gordon Conway (Rockefeller Foundation) also served as a class speaker.