

METHOD & MADNESS

METHOD & MADNESS; Armed With Integrity

By Nicholas Wade

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THROUGH 45 YEARS of cold war rivalry, the superpowers tried only half-heartedly to develop chemical and biological weapons, reserving their true enthusiasm for the perfection of nuclear combat. Had either side gotten serious about germ attacks or nerve gas, the world might now be bristling with another means of destruction just as deadly as nuclear weapons yet far less containable. Broad perceptions of national interest, not philanthropy, fostered this restraint. But if any individuals deserve credit for shaping those perceptions, a President and a professor did more than most.

In an act of unusual statesmanship, Richard Nixon in 1969 renounced biological warfare, just in time to avert an arms race based on the genetic engineering techniques that were invented a few years later.

The other half of this odd couple is Matthew Meselson, a Harvard biologist who, to a degree unusual for a scientist, has learned how to influence Washington and set the terms of public debate. For many years he has divided his time between the laboratory and lobbying against the conversion of biology and chemistry to destructive ends. In his latest foray, he traveled to Russia to investigate the 1979 anthrax outbreak at Sverdlovsk, a troubling sign of Soviet interest in germ warfare.

"I don't know that I've achieved so much," he said recently over lunch at a Chinese restaurant near Harvard Square in Cambridge, Mass. "I do know I've spent a lot of time that could have been spent on biology." In fact, he has made himself an influential player in almost every debate over biological and chemical weapons during the last 25 years.

How could a single scholar influence the affairs of nations? Meselson has applied an unusual set of skills to his purpose. As one of the pioneers of molecular biology, he is a first-class scientist, with analytic skills that have proved decisive in issues like the effect of herbicides in Vietnam and "yellow rain."

Meselson has also learned the difficult game of being both an outsider and an insider, of criticizing the intelligence community while remaining privy to its secrets through a long-held "top secret" clearance. His effectiveness comes from wide access to information and complete analysis of his brief. "He doesn't want to go into anything which he can't master more thoroughly than anyone else," says Paul Doty, a Harvard colleague.

As a young scientist, Meselson spent the summer of 1963 at the Arms Control and Disarmament Agency. At the time, under pressure from the Army Chemical Corps and others, the country was drifting into acceptance of germ and nerve gas weapons, a direction Meselson believed was contrary to the national interest and fraught with danger to humanity. He joined other scientists in petitioning for a review of national policy, a campaign that lifted off in 1968 when a cloud of VX nerve gas escaped from an Army test site in Utah and 6,000 sheep died. The review that Washington eventually began led to Nixon's renunciation.

Meselson led a scientific mission to Vietnam in 1970 to assess the damage caused by the herbicides used to defoliate jungle and kill crops. The White House announced all herbicide operations would stop just as Meselson's commission made its findings public.

Meselson's fearlessness in challenging the Government's experts was also evident in his work on two puzzling incidents of the 1980's, which threatened to undo all the treaty restraints on biological warfare that had been built up in the previous decade. One was the Reagan Administration's charge that Soviet-backed forces in Southeast Asia were using "yellow rain" toxins in warfare. Strand by strand, with help sought from scientists and officials in several countries, Meselson picked away at Washington's case, showing that one premise after another was flawed. Eventually, in a triumph of one man's science over an Administration's mendacity, a truth emerged so humiliating and ridiculous that Washington could never bear to acknowledge it: the samples of yellow rain that intelligence officials had so carefully gathered from the battlefields of Southeast Asia were not some fiendish toxin. They were the pollen-laden excrement of jungle bees.

In the Sverdlovsk case, the truth was not so clear cut and Meselson not so right. The Soviet Union assured the United States that the epidemic was a natural outbreak of anthrax, spread by the sale of tainted meat. United States intelligence agencies believed, to the contrary, that the outbreak was caused by the release of some 10 kilograms of anthrax spores from the military biology installation in the city. If so, the Soviet Union had violated the treaty that forbids production of biological weapons, proving it would cheat on solemn agreements for nugatory gain.

In response to American concern, Moscow dribbled out more data, and in 1988 Meselson termed the elaborated story "plausible and consistent with what is known from previous outbreaks of human and animal anthrax."

Regrettably, the Soviet assurances proved to be a cunning web of falsehoods, and in 1992 President Boris Yeltsin, who had been the chief Communist official of the Sverdlovsk region at the time, said in an interview that ". . . the K.G.B. admitted that our military developments were the cause."

Meselson's recent inquiries at Sverdlovsk, to his credit, reached a conclusion opposite to the one he favored earlier, while fleshing out Yeltsin's summary statement. With the help of local Russian scientists and Jeanne Guillemin, a sociologist and his wife, he

established that almost all those who died had been downwind of the military biology facility, which was the source of the anthrax spores.

In an article in Science last month, Meselson estimated that the weight of spores released was more than a few milligrams but less than a gram. That could conceivably be the amount released from a large research experiment -- and research is permitted by the Biological Weapons Convention.

Yet if a mere research accident was the cause, why did the Soviet Union go to such lengths to respond with disinformation instead of explanation?

Meselson's new study puts a heavy burden on the Russians to make clear what was really happening in Sverdlovsk and elsewhere. Moscow officials might as well yield those secrets now or they will face an indefinite siege. For from the lies of governments Matthew Meselson is determined to extract what he knows as a scientist to be true, that the pursuit of biological weapons is an extreme folly.

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