There has been much interest in biological weapons in recent years, stoked by ongoing debates over weapons of mass destruction in Iraq and by fears that such weapons may fall into the hands of terrorists. The threat came to feel increasingly real when envelopes prepared with pulverised anthrax spores of unknown origin started to appear in the post (along with many more copycat envelopes containing harmless powder), causing panic and chaos in the United States and elsewhere in the West. Historians are becoming increasingly interested in the subject, and it is also slowly finding its way into syllabi in the history of science, technology and war. While usually no substitute for lectures, documentary films provide students with access to original footage on issues in recent history, as well as quick and easy access to interviews with main historical actors. In some (rare) cases, imaginatively produced films can grant students unique insights that they would not get by any other means.(

Susan Lambert’s film tells us above all about the science behind biological warfare. It starts with the British anthrax trials in the Second World War, very briefly, and without much discussion of the research at Porton Down and its origins. The story moves on swiftly to the laboratories of the US biological weapons programme at Fort Detrick during the Cold War. The film makers introduce us to Bill Patrick, a veteran of the programme, who reminisces about how impressed the researchers were with the research opportunities they encountered in the facility (‘…it was fascinating work, really fascinating work…’), allowing and encouraging them to pursue research on germs and diseases which could not be handled safely in conventional university laboratories. Patrick remembers Fort Detrick as an ideal research and development facility. We learn about the controversy unfolding during the Korean War, when the Soviet government accused the Americans of using biological weapons. This controversy, rather than slowing it down, led to an intensification of the US programme. When penicillin and other antibiotic agents threatened the effectiveness of bacterial weapons, the use of myxomatosis to kill scores of rabbits in Australia (‘an experiment in the mass extermination of mammals’) pointed the researchers to the possible use of viruses as weapons. We also hear about the testing of biological agents in the Utah desert and see newsreel footage of happy ‘human guinea pigs’ playing piano in a Fort Detrick common room: conscientious objectors, pacifists and Seventh Day Adventists, for whom Bill Patrick expresses his highest regard. According to the veteran researcher, these experiments yielded ‘very, very important findings’ which could not have been produced otherwise. We do not hear what the volunteers thought about their role – none seem to have been interviewed for the film.

Meanwhile, despite attacking the US over the alleged use of biological weapons in Korea, the Soviets launched their own programme, and again it is researchers’ accounts, interspersed with archive and newsreel
footage, that inform the film. We watch interviews with the physician Ken Alibek, former deputy director of Biopreparat, the Soviet Union’s biological warfare agency, who defected to the US in 1992. We also hear from the virologist Serguei Popov, who worked on the development of a genetically enhanced, especially lethal strain of smallpox. Smallpox was thought to be a particularly effective weapon when the World Health Organisation in 1981 announced the eradication of the disease and vaccination programmes were suspended. According to Popov, ‘it was a very scary weapon’. The Soviet programme continued until the end of the Soviet Union, and led to a spectacular accident with anthrax near Sverdlovsk in 1979. In the US, in contrast, the offensive biological weapons research programme faced increasing public criticism and was discontinued by President Nixon in 1969.

It is one of the weaknesses of Deadly Enemies that the film relies almost exclusively on the reminiscences of a handful of reasonably well-known veterans of biological warfare research, who also know each other quite well. The late David Kelly, head of the first team of western experts invited by Mikhail Gorbachev to visit the Soviet facilities, tells us how impressed he was by the managerial finesse of his host, Ken Alibek, who had to keep his staff from giving out too much information on what they were doing without raising the suspicion of the visitors. Alibek, in turn, remembers that most of those who debriefed him after his defection were unable to grasp what he was telling them. Only when he met Patrick he found someone who spoke the same language – and was duly impressed by what the Soviet scientists and engineers had achieved (‘What in the world would you do with 4,500 metric tons of anthrax?’ Fort Detrick had only been able to produce one metric ton per year). The odd one out among the interviewees is Mathew Meselson, a leading opponent of biological weapons research. However, like the others, he is a scientist, an insider.

An important source of fears over weapons of mass destruction is that they are based on applications of cutting edge science. The effects of chemical weapons have a central place in the collective memory of World War I, and they were contributions of the world’s leading chemists to their nations’ causes. The atom bomb was developed by a colony of the world’s best physicists in the New Mexico desert, who believed that they were helping to defend fascism. In many people’s eyes, what makes biological weapons especially peridious is that they seem to pervert the aims of medicine, for they are based on medical knowledge that is used to kill rather than cure. However, one of the implicit messages of this film is that those researchers interviewed in its making all appear to be perfectly nice people, somewhat proud of what they have achieved. Alibek today is the vice president of a biotechnology firm in the US and Popov seems delighted that these days he is developing vaccines rather than killer viruses. We can be almost certain, though, that under the right circumstances similarly nice people are going to be as impressed as Patrick was by the ideal facilities at Fort Detrick or Alibek and Popov by the opportunities granted to them at Biopreparat. And they will focus their creative energies on the design of new, ever more efficient weapons.

It is slightly regrettable that the film does not give us the dates for many of the events it reports on; nor does it engage with the wider historical and cultural contexts of biological weapons research. Biological warfare has long been occupying the public imagination. Along with other weapons of mass destruction, biological agents of death are invisible. But in contrast with nuclear weapons, for example, which we fear because of the uncontrollable damage inflicted on all things living by invisible rays, there is no large explosion that warns us of the imminent danger of death-dealing bacteria. We have learned that anthrax bacteria may even arrive by mail in an inconspicuous looking envelope. Or we may contract the germs of death while riding a crowded subway train. But unlike the unlucky commuters who became casualties of the sarin gas attack on a Tokyo underground train committed by members of the Aum Shinrikyo cult in 1995, victims of a biological attack, say, on the London Underground would notice symptoms only hours or days later, at a time when half the city’s population would be infected (or so we are led to believe by those warning us about the threat of such attacks). A brochure distributed to all households in the UK earlier this year (‘Preparing for Emergencies: What You Need to Know’) tells us what to do in cases of such or other terrorist attacks.

But it is not just terrorists we have to fear: the film tells us how US biological weapons experts exposed the citizens of San Francisco to two kinds of allegedly harmless bacteria in 1950 in order to learn more about the spread of such agents in populated areas. Who knows, maybe the latest wave of freshers’ flu is the product
of a biological weapons experiment? No wonder that conspiracy theories about the origins of AIDS in some medical research laboratory are so persistent. Unfortunately, Deadly Enemies does not deal with such recent fears of citizens in Western societies, who face increasingly smaller risks of dying premature deaths (not least thanks to scientific and technological advances), but who nevertheless continue to worry, now about the potential dangers posed by science and the technologies designed to keep them warm and safe. Fear, it seems, may be the main effect of biological weapons. Up to the present day, biological weapons have not caused many casualties (at least not outside the research facilities), and there is some evidence pointing to the possibility that their complicated handling due to the frailty of biological agents makes their broad use rather unlikely. Anthrax, with its unique qualities, may be quite an exception. Conventional explosives and the good old handgun have certainly killed far more people in history than these deadly enemies. The film does not discuss such alternative views; it does not challenge the basis of our fears. It is also a pity that the producers did not trust the images and the interviews to stir us up sufficiently: they chose to add an annoying, sensationalist voice-over of the kind better suited for cinema trailers announcing, say, the latest sequel of Die Hard. There are certainly more subtle, surprising and interesting ways of telling the story of biological warfare than that chosen by the producers of this film.

Notes

1. An outstanding example was an eight-part television series on the history of technology broadcast in 1994, White Heat. The series was accompanied by a book: Caroll Pursell, White Heat: People and Technology (Berkeley, 1994). Back to (1)


4. This possibility is discussed, for example, by Ed Regis, The Biology of Doom: The History of America's Secret Germ Warfare Project (New York, 1999). Back to (4)

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