

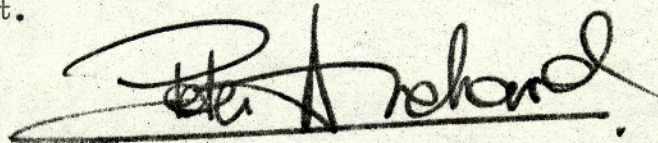
STATEMENT OF EVIDENCE (ADDENDUM) → P.A. ARCHARD

I wish to add the following to the Statements of Evidence which I submitted to the Tribunal of Enquiry on 22 May 1968.

I. On arrival at the Committee Room in Wivenhoe House I made my way to the side entrance in the Bar Room by the Bar Billiards Table with the intention of entering the Committee Room. The door leading into the Committee Room was already open but my way was barred by a number of students in front of me who in turn were ~~not~~ prevented from entering by someone claiming that "This is a Departmental Meeting, not a lecture" or words to that effect. Upon hearing this statement I urged ~~the~~ those in front of me to enter the Committee Room, as I believed the Chemical Society lecture was taking place in the Committee Room. A student wishing to enter the Committee Room who was by the door said: "We have been told that this is a Chemical Society lecture. As such, the Union regulations state that all Union Society functions are open to the members of the University", or words to that effect. We were then allowed to enter.

I supply with this evidence a poster advertising the Chemical Society meeting at which Dr. Inch was invited to speak. The Tribunal will note that the poster states "All Visitors Welcome", stating explicitly that it was to be an open lecture.

II. I supply a copy of the document "Oppose Chemical and Biological Warfare" of which about 470 copies were distributed around the campus immediately the demonstration was over. The document seeks to explain in a serious and academic form the implications of CBW research and thereby the reason why a demonstration took place. Reference sources are given on the last page of the document.



Peter Archard (Postgraduate, Dept. of Govt.)

UNIVERSITY OF ESSEX
CHEMICAL SOCIETY

To E
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A LECTURE ENTITLED

**'CHEMICAL AND BIOLOGICAL
PROPERTIES OF
TOXIC CHEMICALS'**

WILL BE GIVEN BY

DR. T.D. INCH

(C.D.E.E. PORTON DOWN)

on Tuesday 7th May 1968
at 4.30 p.m.

in L.T.B. 2 (LECTURE THEATRE BLOCK)

N.B.

VISITORS ARE WELCOME

OPPOSE CHEMICAL AND BIOLOGICAL WARFARE

Today, Tuesday 7th. May, 1968, Dr. D.T.Inch from Porton Down, Britain's research centre for Chemical and Biological Warfare - commonly abbreviated in "the literature" to CBW was invited to speak to the Chemical Society on "Chemical and Biological Properties of Toxic Chemicals". He was prevented from doing so by a student demonstration.

WHY? Simply because the students involved consider the type of work done at Porton ~~immoral~~ IMMORAL, UNETHICAL, AND DIRECTLY CONTRARY TO THE INTERESTS OF HUMANITY AND CIVILIZATION.

What exactly is meant by CBW? The amount of public information on what is done at Porton is extremely limited; the research there is shrouded in a veil of secrecy and uncertainty. Chemical weapons consist mainly of the "asphyxiating, poisonous, or other gases" outlawed by the Geneva Protocol of 1925. "Biological warfare is the intentional use of living organisms to cause death, disability or damage in man, either by causing his sickness or death, or through limitation of his food supplies or other agricultural resources. Man must wage a continuous fight to maintain and defend himself, his animals, and his plants in competition with insects and micro-organisms. The object is to overcome these efforts by deliberately distributing large number of organisms of native or foreign origin, or their toxic products, taking full advantage of the ability to utilize more effective methods of dissemination and unusual portals of entry. BW has been aptly defined as public health in reverse."

Porton publish many papers from which we can make deductions. The number of papers which remain secret is unknown (only 15% of the papers at Fort Detrick, the equivalent CBW centre in America, are published). Much of the research done at Porton since the war "has been an attempt to understand the biological and biochemical basis of microbiological pathogenicity. In other words how germs produce disease." For example, as with the germ *Pasteurella pestis*, attempts have been made to locate the genetic elements which determine virulence - to induce mutations which will make an avirulent strain (of no military value) virulent. "Much of the research at Porton provides the basic information and techniques which would be essential for defence against bacteriological attack. Should an enemy inundate us with the plague bacillus, for example, a good protective vaccine would be demanded." According to Dr. B.Dixon, a British microbiologist, "... much of the work... can be interpreted as preparation for offensive biological warfare. Much of it can equally well be explained as prudent defensive research."

"In Britain the Ministry of Defence has patented manufacturing processes and delivery systems. Typical examples are Patent Numbers 810930 for a method of making Sarin (GB) and 1029561 for an aircraft spray device. Close liaison is maintained with the US and Canadian CBW establishments, and British inventors are sometimes applicants in patents assigned to the US Army."

LETHAL AGENTS

WHAT IS SARIN (GB)? It ~~is~~ is one of seven nerve gases that are known.

WHAT ARE THE EFFECTS OF SARIN (GB)? The US Army Technical Manual TM 3-215 describes its effects as follows: "... running nose; tightness of chest; dimness of vision and pinpointing of the eye pupils; difficulty in breathing; drooling and excessive sweating; nausea, vomiting, cramps, and involuntary defecation and urination; twitching, jerking, staggering; and headache, confusion, drowsiness, coma, and convulsion. These symptoms are followed by cessation of breathing and death... Although skin absorption great enough to cause death may occur in one or two minutes, death may be delayed for one or two hours. Respiratory lethal doses kill in one to ten minutes, and liquid in the eye kills almost as rapidly."

"By the 1950's the advances (sic) in CBW were enormous." The discovery of the new V-agents which pass rapidly through the skin and into the circulation, constituted one of these "advances". "An almost ~~xxxxx~~ invisible droplet of VE ~~xxxxx~~ or VX on an ear-lobe can be lethal." The V-agents are essentially liquid and non-volatile equivalents of nerve gases. The only protection is all enveloping impermeable clothing which must be destroyed or elaborately cleaned after every contamination. Such reasons may be possible for fighting units, BUT WHAT OF CIVILIAN POPULATIONS?"

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INCAPACITANTS

Nerve gases are LETHAL agents. What about INCAPACITANTS? This is what has been said of BZ, an incapacitating agent. "It has both physical and mental effects, but its precise nature is not clear; unclassified information is notably less ample than for other chemical agents." The following effects are known: "... Interference with ordinary activity, headache, giddiness, disorientation, manical behaviour (sometimes), and increase in body temperature."

LSD-25 is regarded in terms of "militarily promising effects", as an incapacitant with the most potent psychomimetic effects, producing "optical hallucinations, schizoid states, and a sense of depersonalization." In 1964 General Rothschild in "Tomorrows Weapons" writes: "Think of the effects of using LSD-25 covertly on a higher headquarters of a military organisation. Some military leaders feel that we should not consider using these materials because we do not know exactly what will happen and no clear-cut results can be predicted. But imagine were science what it is today if the reaction to try anything new had been: 'Let's not try it until we know what the results will be'".

Chemical incapacitants can induce abnormal conditions of the body. Examples are hyperthermia (heat stroke and exhaustion), orthostatic hypotension (inability to remain standing without fainting), muscular hypotonia (inability to operate many of the voluntary muscles), psychological blindness, vomiting, and anesthesia. The pharmaceutical laboratories spend much of their time eliminating the very effects of these drugs. THE ~~XX~~ CW LABS DOING THE OPPOSITE.

HARASSING AGENTS

The three gases least harmful to the human organism are known as "riot control" or "harassing agents". These are DM (a vomiting agent, whose effects last up to three hours), CS and CN, both of the tear-gas type, causing burning and tearing of the eyes, tightness of chest, etc. for a few minutes only. Of these, only DM is referred to as being "not for use ... where deaths are not acceptable." (sic)

HAVE YOU HEARD OF AEROBIOLOGY?

Nearly all the evidence points to inhalation of aerosol droplets as the best method of transmission of a BW agent. Aerobiology deals with the possibilities of "disseminating infectious agents by aerosols - suspensions of small particles in the air." Considerable research has been carried out in this aspect of BW and it has been shown ~~xxx~~ that the optimum diameter of aerosol particles used should lie between 1 and 5 microns in diameter. Particles of this size will be sufficiently small to pass down into the lung and penetrate the alveoli of the lung wall." "Aerosols of this size can be produced quite simply ... particles of such small size will drift down to Earth slowly, allowing maximum time for them to spread over large distances by the prevailing ~~xxxx~~ meteorological conditions." For example, Dr. LeRoy Feathergill, who has worked at Fort Detrick, released 200 kgs. of zinc cadmium sulphide (a harmless fluorescent material) as an aerosol of 2 micron diameter during a 25 km boat trip 16 kms from the shore. The aerosol travelled 750 kms down wind and covered 90,000 sq. kms.

IN MILITARY TERMS, WHAT IS THE FEASIBILITY OF USING CBW AGENTS?

"Arguments military strategists have put forward in favour of using biological agents run roughly as follows. Compared with nuclear weapons, technologies involved are extremely cheap and theoretically very simple. Any country with the ability to produce vaccines ^{could} ~~xxx~~ manufacture virulent strains of micro-organisms in sufficient quantities to produce large-scale effects. With the exception of botulinus toxin and other chemical substances, BW agents are self propagating in their human hosts, and therefore only minute quantities would be required ~~xxxxxxx~~ to initiate disease. The manufacturing unit required would be small and easily concealed (for this reason it is not known how many centres and nations are now engaged in BW research). Delivery of the agents would not require an expensive force of nuclear bombers, missiles and ~~sub~~ submarines; they could be dropped from a small aircraft, into ventilation systems, or the public water supply. Furthermore, the result of the attack would only affect the population (humans, plants, animals): communications, bridges, roads, and buildings would be left unharmed. FOR THIS REASON BW HAS BEEN TERMED "NON-DESTRUCTIBLE" WARFARE" IN THE US.

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"However, the ideal characteristics of a BW agent are very stringent. It must be highly virulent, ~~produce an intoxicating~~ of lethal ~~and~~ effect quickly, be capable of production in large quantities and storage for a period of two or three weeks, be highly stable when propagated as an aerosol, be infectious through the respiratory route and difficult of impossible to cure. Furthermore, there must be a low level of both artificial and natural immunity in the population at risk, ~~xxxxx~~ and the user alone should possess a highly effective and long lasting vaccine. There are few, if any, naturally occurring infectious organisms which fulfil all these requirements, although with modification~~x~~, some existing ones could be endowed with many of them." BUT, IT IS THESE "IDEAL CHARACTERISTICS" WHICH CBW RESEARCH IS CONCERNED WITH DISCOVERING.

SO WHAT?

The information and implications outlined above are drawn from very limited sources. In any case the information available is minimal. As non-experts, are we drawing the wrong conclusions? WE DEFINITELY DO NOT THINK SO.

One scientist has argued that "... the existence of BW agents and the efforts of nations to improve them probably constitute a hazard comparable to the stockpiling of nuclear weapons. Although they may not be reliable in action the chance remains that their accidental or deliberate release might produce more fatalities than the use of several large nuclear devices. An example from the animal kingdom will suffice to ~~xxxxxxx~~ make the point. In May 1952 in the Department of Eure et Loire in France one or two rabbits were inoculated with myxamatosis virus. By the end of 1953 the disease had spread through 26 Departments in France, and through Holland, Belgium, Germany and Switzerland, killing between 60% and 90% of the rabbit population#

"It seems that some nations are now prepared to accept the risk of a human catastrophe of this kind in return for the possession of a weapon ~~of~~ of unknown if not dubious value. It is not surprising that Pugwash - the international association of scientists dedicated to the preservation of world peace - have since 1959 been seeking ways of bringing about biological disarmament."

In the US. 22 leading scientists, including John Edsall, Felix Bloch, Paul Doty, Robert Hofstadter, and E.L. Tatum, initiated a petition which was eventually signed by 5000 scientists. It was sent to President Johnson and it stated: "CB weapons have the potential of inflicting, especially on civilians, enormous devastation and death which may be unpredictable in scope and intensity; they could become far cheaper and easier to produce than nuclear weapons, thereby placing great mass destructive power within the reaches of nations not now possessing it; they lend themselves to use by leadership that may be desperate, irresponsible, or unscrupulous..."

"US forces have begun the large-scale use of anti-crop and "non-lethal" anti-personnel chemical weapons in Vietnam. We believe this sets a dangerous precedent, with long term hazards far outweighing any short term military advantage. The employment of any one CB weapon weakens the barrier to the use of others. No lasting distinction seems possible between incapacitating and lethal weapons or between chemical and biological warfare. The great variety of possible agents forms a continuous spectrum from the temporarily incapacitating to the highly lethal. If the restraints of the use of one kind of CB weapon are broken down, the use of others will be encouraged."

THE DANGER IS ACUTE. IF WE ARE TO MAKE PEOPLE CARE ABOUT THE CONSEQUENCES OF THEIR ACTIONS, WE MUST FIRST MAKE THEM AWARE OF THOSE CONSEQUENCES.

"It is time we ~~knew~~ knew the facts. There may not be much time. According to "Science", a factory in Indiana has been working round the clock since 1960, loading the nerve gas Sarin, into landmines, artillery shells and rocket missiles."

WE FEEL TOTALLY AND MORALLY JUSTIFIED IN HAVING DEMONSTRATED AGAINST DR. D.T. INCH. WE OPPOSE ALL CHEMICAL AND BIOLOGICAL WARFARE RESEARCH EVERYWHERE.

Essex University, Wivenhoe Park,
COLCHESTER, Essex. 7 May, 1968.

PTO.

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