

## Soldiers as experimental animals

**The Institute of Medicine in the United States has described a chilling tale of how the military used service people in tests of the effectiveness of poison gases against humans.**

THE Cold War is long since over, of course, while now there is a treaty to ban the use of chemical weapons that will, when ratified, decrease the chances that future wars will kill people by poisoning them. But none of that, unfortunately, implies that the horrors of chemical warfare can simply be put out of mind. In recent years, the Kurdish people of Northern Iraq have been forced to learn that lesson at their own government's hands too well for anybody's comfort — especially for that of those of us who live elsewhere. But even if the new chemical treaty puts a stop to what the likes of the government of Iraq has been up to, the consequences of past interest in chemical weapons in places very different from Iraq will cast a long shadow. Those with a ghoulish taste in reading-matter could thus do worse than plough through last month's report from the US Institute of Medicine that catalogues the experiments to study the effects of chemical weapons on human beings carried out in the United States between 1943 and the end of the Second World War (*Veterans at Risk: The Health Effects of Mustard Gas and Lewisite*). Taste apart, the rest of us should also pay attention.

It is a curiously casual tale of bungling indifference to people's welfare. During the First World War, the United States (like its British and French allies) had used mustard gas in retaliation for the first use of this material by the German military. Not much else seems to have happened in the United States until 1941, when the US military set out to relearn what had been forgotten about the effects on people of materials such as mustard gas and its close relatives, lewisite and nitrogen mustard (in which a sulphur atom is replaced by an arsenic and a nitrogen atom respectively). But then, between 1943 and the end of the Second World War, at various times and at different military bases, an estimated total of 60,000 service people were exposed to these agents.

In some cases, drops of the liquid were placed on forearms. In others, troops were asked to manoeuvre on contaminated ground, with or without protection. Yet others were fitted out with protective gear and asked to spend long periods (four hours or so) in gas chambers; some of them were asked to come back the following day. Surprisingly, by present standards of litigiousness, complaints from injured service people (called "veterans") filtered into the US Department of Defense only late in the day, nearly half a century after the event. The Institute of Medicine committee under Dr David P. Rall (previously a director of the National Institute of Environmental Health Sciences) responsible for the report also tells how the military gleaned uncovenanted

insight into the effects of poison gas from an incident in which a US military transport was sunk in the harbour of Bari, in southern Italy; 83 military personnel and nearly 1,000 civilians were killed.

That experiments of this kind should have been carried out at all is bad enough. That they should have been as poorly documented as the committee found is almost beyond belief. After exposure to mustard gas, even if there are no blisters, there may be a general reddening of the skin known as erythema. During the wartime exposure of people, this was taken as an index of damage done to service people, some of whom also complained of damage to their eyes or lungs. Even allowing for the wartime preoccupation of the military with the acute effects of poison gas on soldiers, it seems remarkable that so little was done, by medical examination, to understand the less than obvious effects of exposure, but that appears to have been the case.

The committee is rightly scathing about the whole affair, which has been a military secret since the end of the Second World War. Hapless participants in the trials were even sworn to secrecy before taking part, and seem loyally to have kept their silence for much longer than could reasonably have been expected. (In its preface, the committee pleads that the US government should even now acknowledge the bravery of these people, and honour those who still survive.) It also pleads for an understanding that military experiments with human subjects should in future be undertaken only under guidelines comparable with those proscribing biomedical research in the civilian sector. Inevitably, it concludes that many of the veterans who have complained of chronic illness as a consequence of their exposure have a case that needs answering; the committee would have been able to say more if it had been given access to all the facts. In short, it has described a scandal that calls for further digging. □

## Clinton's honeymoon

**President Bill Clinton deserves a longer respite from his most severe critics than he is getting.**

WINNING the US presidency is a great prize, but it can also be a recipe for lying on a bed of nails. That may be President Bill Clinton's most vivid discovery so far. He seems to have been denied the period of indulgence usually offered to newly