

- 13 Vergani D, Mieli-Vergani G, Alberti A, *et al*. Antibodies to the surface of halothane altered rabbit hepatocytes in patients with severe halothane-associated hepatitis. *N Engl J Med* 1980;303:66-71.
- 14 Taylor TWS. Halothane and the liver. *Br Med J* 1986;293:335.
- 15 Kenna JG, Neuberger J, Williams R. An enzyme linked immunosorbent assay for detection of antibodies against halothane-altered hepatocyte antigens. *J Immunol Methods* 1984;75:3-14.
- 16 Kenna JG, Neuberger JM, Williams R. Characterisation of halothane induced antigens by immunoblotting. *Biochem Soc Trans* 1985;13:901-11.
- 17 Walton B, Simpson BR, Strunin L, Doniach D, Perrin J, Appleyard AJ. Unexplained hepatitis following halothane. *Br Med J* 1976;i:1171-6.
- 18 Kenna JG, Neuberger J, Alexander GJM, Williams R. Production in vitro of antibodies to halothane-induced liver antigens by lymphocytes from patients with halothane hepatitis. *J Hepatol* 1986;3:541.
- 19 Lewis JH, Zimmerman HJ, Ishak KG, Mullick F. Enflurane hepatotoxicity, a clinico-pathologic study of 24 cases. *Ann Intern Med* 1983;98:984-92.
- 20 Neuberger JM. Halothane and the liver. Oxford: University of Oxford, 1984. (DM thesis.)
- 21 Wark H, O'Halloran M, Overton J. Prospective study of liver function in children following multiple halothane anaesthetics at short intervals. *Br J Anaesth* 1986;58:1224-8.
- 22 National Halothane Study. Summary of the National Halothane Study. Possible association between halothane anesthesia and post-operative hepatic necrosis. *JAMA* 1966;197:775-88.

(Accepted 12 February 1987)

Letter from . . . Chicago

Philosophers and other threats to health

GEORGE DUNEA

Can philosophers ever be a threat to health? The thought fleetingly and irreverently crossed my mind as I was reading the latest article by Professor Ivan Illich, a long time critic of the medical establishment.¹ After all, Socrates was enough of a threat to be put to death by the ancient Athenians. Tolstoy thought that Nietzsche was completely mad by the time he wrote *Zarathustra*. Yet philosophers like Nietzsche have exerted enormous influence. Some have inflamed susceptible minds with their seductive theories even while staying put quietly at the British Museum in the reading room. Could they conceivably be even more pathogenic than doctors?

But now Professor Illich no longer views doctors as the major threat to health. He has discovered a far more dangerous pathogen: our pursuit of a healthy body. Once again we have found the enemy and once again he is us. Complacently we have stood by while a multimillion "health industry" has taken over, offering advice and handholding to the fibre eating health magazine readers whom the doctors are too busy to see.² These new pseudoscientist healers diagnose yeast cells in the blood as a cause of your tiredness, and cure it with a garlicky remedy that only they sell. They analyse your hair to find out which mineral or vitamin you need to buy from them. They measure your body fat by pinching you with calipers; determine your skin's resistance and electromagnetic balance with galvanometers; and perform stress tests, conveniently combined at health clubs with a massage, the sauna, or the whirlpool, and various "cardiovascular" exercises carried out perched on a stationary bicycle while hooked up to a pulse monitor that lights up as you reach the top of an imaginary hill.

How harmful are these practices other than wasting people's money? Professor Illich rails against these "sundry holistic well-being programmes," this "curious mixture of opinionated and detailed self-care practices." He thinks this mumbo jumbo could cause even more harm than 100 000 patients being seriously injured each year by hospitalisation. His numbers would become even more impressive were he to include the victims impaled by faulty seats of exercise bicycles, falling off stress test machines, dropping dead while jogging, or catching amoebiasis from high colonic therapeutic enemas.

Less easy to understand is Professor Illich's concept of how the

pursuit of a healthy body came to exert such a damnable influence on our wellbeing. I took his recent article to the beach during my latest trip to Australia, expecting to find it difficult but aware that if philosophers were readily understood they would not be philosophers but merely like the rest of us. On the beach I settled down on my towel and read every word, slowly, aloud. There was no problem with this: the locals merely thought that I was deciphering one of the many ethnic newspapers published in Serbo-Croatian, Ukrainian, or Maltese. By the time that a gust of wind scattered my documents on the sand I had gathered that our infatuation with the body dates back to about AD 1110. I understood that before that time, during the Dark Ages, people worried more about their souls roasting on a skewer in purgatory than about frying their bodies on the beach or achieving immortality through jogging. But now the sun was setting I had already indulged in both of the above mentioned exercises; besides, I had to scurry to retrieve the reprints scattered by a decidedly anti-intellectual southerly wind.

Modern day witch hunts

Among these reprints were some about witchcraft. I learnt that witch hunts are precipitated not by the sudden invasion of squadrons of hags riding on broomsticks but by some threatening event unleashing the dark forces of evil in an otherwise advanced society. Hence these persecutions took place not in the Dark Ages but during the enlightenment of the Renaissance and of modern Germany and the McCarthy era. Witch hunts tend to occur when societies lack the checks and balances that stop a single group (judges, military, the media) from becoming too powerful. They may be precipitated by political or social disasters or by epidemics—such as syphilis was in the 1500s³ and the acquired immune deficiency syndrome (AIDS) could become some day. In New England, in 1692, the culprit may well have been an outbreak of ergotism. Thus the reported tinglings and fornications, convulsions, twitchings, muscle spasms, deliriums, and hallucinations would have been caused not by the devil but by *Claviceps purpurea* growing on rye. This may have occurred at a time of increased dependency on rye, the wheat crops having failed during a series of cold winters—as suggested by study of tree rings.⁴

Yet direct information about the food supply at that period is largely lost or has been long forgotten. For this was before tetrahydroaminoacrine or THA, the new memory drug. Not available for general use, it cannot even be prescribed by doctors. It

is therefore no threat to health in the Illichian sense. But it remains a thorn in the side of the *Wall Street Journal*, which thinks that the Food and Drug Administration is rigid and unresponsive to suffering. Already THA has improved the memory of 16 out of 17 patients with Alzheimer's disease, allowing totally incapacitated people to recognise their relatives, resume hobbies and activities, or return to work. Other drugs mentioned as being wrongly withheld from the public are Oculinum, a drug that strengthens the eye muscles and alleviates congenital crossed eyes and blepharospasm; clomipramine, which helps obsessive compulsive disorders; erythropoietin, which will correct the anaemia of patients receiving dialysis; and the drugs being developed to treat AIDS.

Another interesting drug, RO-15-4513, antagonises the effects of alcohol on the brain, preventing people from becoming drunk, but without opposing its other actions. Unlikely to be developed, let alone be approved for marketing, it may act by blocking alcohol stimulated chloride uptake by gamma aminobutyric acid receptors.⁵ As a result animals treated with the drug behave as though they were sober despite having high blood alcohol levels. In the same issue of *Science* we read about MPTP, a neurotoxic accidental contaminant of heroin causing a parkinsonian syndrome in northern California by damaging the substantia nigra. The drug is believed to be converted to compounds that interfere with intermediary metabolism by generating an oxidation centre and blocking respiration in the mitochondria. Also pathogenic are oxygen containing free radicals,⁶ which are generating intense interest as contributing to tissue damage in myocardial infarction and strokes. By oxidising the low density lipoproteins of fatty streaks they may also injure the endothelium and cause arteriosclerotic plaques; and by inactivating enzyme inhibitors in emphysematous lungs they may allow elastase to cause further damage. Hence the attempt to use enzymes such as superoxide dismutase and catalase to break down the superoxide radical and prevent tissue damage in these various conditions.

At least 350 000 roaming US streets

Another threat to health is the lack of a house. Though the occasional philosopher can dispense with such luxury and live in a barrel, this requires not only equanimity but also sunny skies, orange groves, and olive trees growing wild in the countryside. Not so in North America, where even sleeping on hot air gratings may not prevent hypothermia and frostbite. Here homeless people also tend to become ill from infestations, infections (especially drug resistant tuberculosis), and trauma—also from untreated hypertension, diabetes, and other degenerative or chronic diseases.⁷ Seen especially in certain central areas of the large cities, the homeless line up at missions for free food or shuffle along begging for money. Often alcoholic and generally unemployed, they are mostly young or middle aged single men, and up to 40% may be suffering from

serious mental illnesses. This problem of the homeless began largely with the deinstitutionalisation of the mentally ill and the release of thousands of patients from asylums without provision being made for shelter or outpatient treatment. At least 350 000 such individuals are now believed to be roaming the streets, perhaps many more, including some 3000 in Chicago. Recently a task force of the American Psychiatric Association emphasised the need for a comprehensive and integrated system of care for the mentally ill, including facilities for assessment and care, crisis management, housing and asylum, and sanctuary when needed.⁸ Likewise the Chicago Board of Health has presented plans to set up group housing, improved boarding home facilities, treatment and vocational services, and stricter standards for monitoring the care of the deinstitutionalised.

Danger of mummies

Among other threats to health there is a cheap form of heroin called black tar, 45 times more potent than the conventional material and likely to cause more addiction and complications. Sniffing butyl nitrite, the so called liquid incense, causes not only euphoria but also headaches, syncope, and methaemoglobinaemia, and may even play a part in the induction of Kaposi's sarcoma of AIDS. A study of Nepalese villagers and Australian aborigines suggests that excessive exposure to sunlight may cause cataracts—so that there "are reasons beyond looking like a movie star to wear sunglasses." Some time ago a Canadian paediatrician expressed concern about the possible danger of mummies, worrying specifically about the suspicious rash of Rameses V, and about individuals who had died from smallpox in the Arctic and may still be harbouring the frozen but viable virus.⁹ Definitely non-pathogenic, however, is *Lipomis macrochirus*, recently elected by 780 000 Illinois schoolchildren as the official state fish and known outside scientific circles as the bluegill. Election officials reported that the race was close, the sleazebag carp, slimebag catfish, and largemouth bass each having considerable support. But the newspapers conceded that it was a fair fight and that the best fish won.

References

- 1 Illich I. Body history. *Lancet* 1986;iii:1325-7.
- 2 Johnson R. Popularity of novel health tests worries many doctors, regulators. *Wall Street Journal* 1987 January 21:23.
- 3 Sanchez P. The witchcraft epidemic. *Scope* Spring 1984:10-26.
- 4 Matossian MK. Ergot and the Salem witchcraft affair. *American Scientist* 1982;70:355-8.
- 5 Gina K. New drug counters alcohol intoxication. *Science* 1986;234:1198-9.
- 6 Marx JL. Oxygen free radicals linked to many diseases. *Science* 1987;135:529-31.
- 7 Marwick C. The "sizable" homeless population: a growing challenge for medicine. *JAMA* 1985;253:3217-25.
- 8 Lamb HR, Talbot JA. The homeless mentally ill. *JAMA* 1986;256:498-501.
- 9 Lewin PK. Mummified, frozen smallpox: is it a threat? *JAMA* 1985;253:3095.

What evidence do we have on standardised mortality rates and life expectancy among the aristocracy in Britain?

The study of the British aristocracy reached its peak with the publication of an entire supplement to the journal *Population Studies* in 1964, with over 500 volumes referenced and over 100 authors cited.¹ Demographers have found the study of the peerage particularly rewarding because of the reliability of the vital statistics in this group. Nevertheless, comparisons with the rest of the population are difficult in Britain before 1837, when registration data became generally available. Hollingsworth studied over 26 000 individuals between the years 1603 and 1938.¹ The following comparisons are based on a series of life tables prepared by Case.² Life expectancy at birth among the aristocracy was 42 years (1752), 49 (1793), 52 (1840), and 60 (1910). This compared with 40 (1840) and 55 (1910) among the general population. In other words the aristocracy achieved certain levels of life expectancy about 100 years before the general population. Although life expectancy at birth differed, this difference has been steadily reducing. Life expectancy at the age of 10 or 20 has shown no difference between the aristocracy and the

general population since 1860. If one compares mortality data by social class the differences are substantial in the perinatal and infant period. For example, perinatal mortality rates in 1975 among social class I were 13.8 per 1000 compared with 27 among social class V.³ By 1985 the corresponding figures were 7.7 and 12.4.⁴ Based on the 1971 census the SMR in men aged 15 to 64 were 83 in social class I and 116 in social class V. The equivalent standardised mortality rates in men aged 65 to 74 were 78 and 100.⁵ The social circumstances of a person's family appear to confer certain privileges which operate most strongly around birth but with advancing age the advantages seem to diminish.—STEPHEN FARROW, senior lecturer in epidemiology and community medicine, Cardiff.

- 1 Hollingsworth TH. The demography of the British peerage. *Population Studies* 1964;suppl 18:57.
- 2 Case RAM, et al. *Serial abridged life tables 1841-1960*. London: Chester Beatty Research Institute, 1962.
- 3 Office of Population Censuses and Surveys. *Perinatal and infant mortality: social and biological factors 1975-1977. Studies on medical and population subjects No 41*. London: HMSO, 1980.
- 4 Office of Population Censuses and Surveys. *Infant and perinatal mortality 1985. OPCS Monitor* 1987. (DH3 87/1.)
- 5 Fox AJ, Goldblatt PO. *Longitudinal study 1971-5*. London: HMSO, 1982. (Series LS No 1.)