

Pernicious weed

It is strange to remember that, not long ago, the smoking and chewing of tobacco was a common phenomenon and not one to which any reasonable person could take exception.

In the popular dramas of the inter-war years, part of the action of a play was arranged by a character lighting up a cigarette to relieve or intensify the atmosphere aroused by the script. Individuals with a cigarette drooping from a lax mouth were to be seen at every turn, and the cigar or the pipe was considered a sign of advanced age, business success or social superiority.

It is no longer quite so simple. Personally, I feel disgust whenever I come across a photograph of one of my ancestors smoking, and much of modern society feels little sympathy with a smoker.

We tend to forget that the filthy side of smoking is not a new concept. Ben Jonson's 'Bartholomew fair' (1614) contains the lines: "The lungs of the tobacconist are rotted, the liver spotted, the brain smoked like the backside of the pig-woman's booth here and the whole body within, black as her pan you saw e'en now without." And he remarks later: "Neither do thou lust after that tawney weed tobacco."

Despite savage criticism, including that of James I in his famous "Counterblast" of 1604, tobacco maintained its malign influence, sustained by governments and industrialists who continued to make fortunes from it. Even now, when more is known of its effects than ever before, tobacco has its advocates and continues to avoid stern suppression as an addictive drug.

Passive smoking has become a major issue. An editorial in *The Lancet* for 27 July refers to a paper published by the International Agency for Research on Cancer, a branch of the World Health Organization, offering further evidence that second-hand or environmental tobacco smoke is carcinogenic. There is a significant association between lung cancer and smoke exposure from a spouse, and between lung cancer and smoke exposure at work. As yet there is no clear evidence that children exposed to parental smoke have an increased cancer risk. Overall, tobacco kills 4.2 million people annually, and WHO predicts a rise to 10 million "if robust steps to curb the epidemic are not taken immediately."

A paper published in the *British Medical Journal* for 27 July, from the University of

California, San Francisco, covering material gathered from the United States, Australia, Canada and Germany, concludes that in totally smoke-free workplaces, the prevalence of smoking is reduced by 3.8 per cent, with 3.1 per cent fewer cigarettes

being smoked per day per continuing smoker. The designation of a workplace as one where smoking is forbidden not only eliminates the hazard of passive smoking for staff who do not follow the habit, but also makes it easier for would-be smokers to reduce or discard the habit. If all workplaces were made smoke-free zones, tobacco

consumption in the US would be reduced by 4.5 per cent and in the United Kingdom by 7.6 per cent per head, a more effective health outcome than raising the tax on tobacco products.

Staying power

There is a general assumption that when it comes to sporting events requiring a substantial degree of physical exertion, men outshine women almost invariably. Yet the race is not always to the swift or the battle to the strong. The physiological and muscular differences between the sexes are capable of being exploited in either direction in the course of competition, as is demonstrated in a letter from an expert at the University of Texas, published in *The Lancet* for 6 July.

The author of the letter collected data for various sporting events and assessed the differences between the two sexes in each type of sport. In most events, such as running, ice skating and cycling, the findings indicated that men would be expected to outshine women by a large margin. However, when it came to fastest swimming times over various distances the difference became less, progressively so with increasing distance. The same effect could not be detected in other distance-dependent or duration-dependent competitions such as running.

The physiological explanation for the smaller sex difference with increasing swimming distance is that the oxygen demand is lower in women, so that energy can be conserved for longer. The greater

swimming economy of women is attributable to smaller body size, lower body density, higher proportion of body fatty tissue and shorter legs. These result in less drag in the water, greater buoyancy and a more horizontal poise. These same factors render women less successful than men in other sports.

The projected swimming distance over which women surpass men is about 25km. In marathon swimming, women may be expected to outshine men in their prime of life. The record fastest time for swimming the English Channel was held by a woman for many years, and the longest non-stop ocean swim record of 196km in 38h 33m is held by an Australian woman.

Remote relations

In 1903 the cave that came to be known as Gough's Cave, near the lower end of Cheddar Gorge, achieved some fame through the discovery there of a human skeleton of late Stone Age date, now celebrated as Cheddar Man, and exhibited at the entrance to the cave. In their classic work 'The netherworld of Mendip' (1907), Ernest Baker and Herbert Balch record that the skeleton was found by Baker and other speleologists some 30ft below the cave floor level while they were seeking the underground river that traverses the cave, in clay filling a vertical shaft. Another report maintains that when the cave's discoverer, R. C. Gough, had trouble with flooding, he caused a drain to be dug, in the course of which the remains were exhumed.

In any event, the relic and associated flint flakes drew great interest, and I well remember in my schooldays examining the exhibit with fascination. He was estimated to be 23 years old, only about 5.5ft tall, with leg bones indicative of a squatting habit. He was supposed to have drowned in a flood. The fact that other limb bones discovered in the locality had been split to extract marrow suggested that Cheddar Man belonged to a cannibalistic race.

Recent work undertaken by scientists at Oxford University to examine this possible cannibal trait has led to an astonishing revelation. A sample of DNA derived from a tooth has demonstrated a kinship with a modern local resident, a schoolmaster living only a short distance from the cave. When you consider that the individuals in question are separated by a time span of some 9,000 years, it is not surprising that Cheddar Man's descendant should have been astonished. There is, naturally, no evidence that the ancestor had any children, but the mitochondrial DNA examined is known to be inherited through the maternal link, suggesting that his mother or sister transferred the trait. Speculation has been raised that DNA testing of other residents in the vicinity might be undertaken to discover whether Cheddar Man has other distant relatives around his native village.

