

our water. Man will go on making mistakes and it is vital that he should recognise this and deploy the necessary resources to avoid or correct them. We can afford to do whatever we regard as most important. If air pollution, water pollution, soil pollution, and a poor diet are sufficiently important then we can spend our money to put them right.

The title of my lecture *The world we want our children to live in* suggested that I was going to look into a crystal ball and describe the Utopia that lies ahead. I am not going to do this because the world is already a very much better place for children. Infant mortality is decreasing, life expectancy is greater, education is improving, and the opportunities for children to broaden their horizons both at home and abroad are considerably better than they ever have been. The major problem is that some children are deprived of these opportunities. Children have different potentialities and it is disturbing that many children do not get the opportunity to realise their potentials.

### **More opportunities**

What are the opportunities that the world should provide? The child's world is his home, his neighbourhood, his school, and his own relationship to people. I would like to see a world in which all children could achieve their maximum physical potential by having good health, a good diet, shelter from the really hostile environment, and their maximum mental potential by having stimulation, encouragement, play material, and constructive guidance.

There is an opportunity for us to do more in this field by providing more nursery schools, day nurseries, and play groups. The children who usually enjoy these facilities are the ones who least need them, while those in real need often do without.

As well as helping people to get the best out of life we must also help them to put something into life. Man is a moral as well as a creative being and we must not forget the danger of failing to teach moral values. There is no point in advancing our technological knowledge and educating our children without at the same time teaching them values. For our children the greatest risk in the hostile environment of the future is an environment without values.

## **DISCUSSION**

### **Dr D. L. Crombie**

Fish protein has been said to be safe because it is a food with a balanced fat content. Can the same not be said for Welsh lamb and mutton?

### **Dr Michael Crawford**

It is perfectly true that fish is the one natural food resource which has not been over-manipulated other than by cadmium and mercury pollution, mainly in Japan and in the Baltic areas. The latter is a very serious problem because of the unpleasant effects during pregnancy. There are oily fish and lean fish, but both are very valuable with regard to the structural fats.

Animals are a slightly different problem. We did buy a pig from a Welsh farmer who said that he was producing lean pigs but when we dissected it we found that it was as bad structurally as the ones in the supermarket. On investigating further we found that he fed his pigs on exactly the same foodstuffs that all the other pig farmers are using. This attitude to animal feeding is fairly universal in so far as a high energy diet is used.

Lambs raised on the hills can be very good, but the beef from the Welsh hills is not of such good quality. While the cattle roam free they get plenty of exercise and are quite lean with all the correct types of fat. The farmers then take the cattle and for three to four months put them on a high energy diet to fatten them before market. This is the

same as confining a man to bed and then giving him a 5,000 calorie diet. He loses muscle and puts on fat and this is precisely what happens to the Welsh beef cattle. It is a fact that the hill raised animal's carcass will produce three times as much protein as adipose fat, but that an intensively fattened animal will produce three times as much adipose tissue as protein. This is the kind of change that can take place without regard to what happens to all the other nutrients that should be present.

**Chairman**

Dr Pinsent, perhaps you have some comments to make about this subject regarding fish and in particular the trout.

**Dr Pinsent**

It has already been said that the mountain sheep are sweeter and the valley sheep are fatter. The only relationship between fish and sheep, to my knowledge, refers to Iceland. The inhabitants of Iceland have a differential ulcer and stomach cancer rate between the two ends of the island. The inhabitants at one end eat smoked mutton whilst the others eat smoked fish. The latest evidence is that it is likely to be the smoke interacting with the carcinogens that is causing the problems.

As far as trout is concerned, we are looking at the liver and muscle in much the same way that we have looked at the soil. Professor Warren has already been the cause of the closure of various Canadian lakes that provide fish for food. Indeed if you visit these Canadian lakes you will see a notice which says " You can catch any number of fish in here, but for God's sake don't eat them! "

**Professor R. W. Smithells**

I believe that some of the Eskimos in North Canada also get gastric ulcers from eating smoked fish. My only other contribution to this discussion concerns a cartoon which I saw in the *New Yorker* magazine. This showed one astonished laboratory worker saying to a colleague, " My God, there are traces of tuna fish in this consignment of mercury! "

**Professor Oakley**

I had always supposed that there was a great deal more to eating than just nutrition. I have always enjoyed fish from choice, but now I have a good excuse for continuing or even stopping if I feel like it. What we really need is a bottle of nutrients which we can take every day to guard against deficiencies and this would allow us to eat for pure enjoyment. I would recommend this.

**Dr P. Thomas—South Wales**

Cigarette smoking has come under heavy fire from the Royal College of Physicians. How dangerous is pipe and cigar smoking and can the cilia really know the difference between cigarettes and pipes?

**Dr Hodgkin**

The interesting thing is that most doctors have given up smoking while other people have not. This is very relevant and impresses most patients.

**Dr Swinburne**

The major problem is that there are not enough smokers of pipes and cigars to give reliable statistics. It is also hard to find non-smokers in sufficient numbers to compare with smokers. My own observations of pipe smoking is that it consists of fiddling, tapping, scraping and spitting, but very little actual smoking. I have seen only one important paper on the effects of smoke on the non-smoker. The effect of smoke on a susceptible non-smoker is very irritant and unpleasant and from my personal experience

cigar smoke is just as irritant. The real answer is that we do not know enough about the problems of smoking.

**Professor Oakley**

There is a good deal of truth in that statement and as a young person I was fortunate enough to be told that the really objectionable thing about smoking was that it diminished one's sense of taste and therefore the enjoyment of food. I have never been tempted to smoke and I still have a very good palate. Dr Swinburne is perfectly correct and I agree with her that pipe smoking is an art, whereas cigarette smoking is merely a habit.

**Dr Pinsent**

One hazard in pipe smoking, which is only shared by people who use cigarette holders, is the marked erosion of the upper and lower incisors. There comes a time when this proceeds so far that in order to bite the subject has to overclose, which in the long term sets up temporal arthritis.

**Chairman**

I would like to add that the small print in the Royal College of Physicians report says that pipe tobacco is air dried and cigar tobacco is sun dried. Cigarette tobacco is heat dried, so that you are smoking tobacco combined with furnace fumes which, atmospherically, is a more injurious microclimate. If a safe cigarette tobacco could be invented which would go out as frequently as pipe tobacco, allowing the smoker to fiddle, tap and knock, then this might be a considerable safeguard.

**Floor**

I remember reading in *The Lancet* that Greek and Turkish physicians say that their cigarette tobacco has less carcinogens than the tobaccos we smoke. This could be due to the different methods of preparation.

**Dr P. Thomas—South Wales**

I would like to confirm Dr Pinsent's statement on the effects of the weight of a pipe, as this has caused me to lose three teeth. The other point I would like to make is that during the course of 24 years of practice in Llantwit Major I have observed that all the pipe smokers seem to live to their eighties or nineties.

**Dr Pinsent**

The other relevant matter concerning tobacco plants is that they are sprayed with insecticides and fertilisers. In addition they are grown on soil which has been the past recipient of arsenic in large quantities. Much of the production of Cornish arsenic was exported to the tobacco growing countries. We have been investigating tobaccos from various sources in respect of their trace substance content. One finding was that Rhodesian tobacco has higher radioactivity than tobaccos grown in other areas. This takes me back to my earlier statement that we must be on the look out for vehicles on which trace substance excesses can be carried into the human body.

**Floor**

Perhaps Dr Crawford could inform us of any work that has been done in relation to the use of oestrogens and other artificial fattening hormones and their effects on the fats of our livestock. This is surely a problem, as one half of our population is eating these hormones in great quantities.

**Dr Michael Crawford**

Not only have the oestrogens been studied, but also the other nameless class of growth promoters of which some of the details have not yet been published. One paper shows

that the faster the animal grows the poorer are the structural lipids. This correlates with much other biological information.

Derek Miller, of Queen Elizabeth College, has shown that rats fed on high protein diets grow faster than rats on low protein diets but then they also die earlier. One of the growth promoters in the guinea pig is lysine, which is in common use in the pig industry, and we accidentally discovered that histidine and arginine were also guinea pig growth promoters. This probably works via a hormonal insulin reaction, as the free amino acid is rapidly absorbed, accelerating the release of insulin. We confirmed Miller's reports that the faster the animal grew the earlier it died and that these changes were associated with alterations in the structural lipids at a cellular level. This has been found experimentally in both the laboratory and the domestic animal.

**Dr H. Booth—Marsden**

Dr Hodgkin said that 60 per cent. of women exhibited neurosis at some stage in their lives. Most of the remarks have been focused on our physical environment and we are in danger of forgetting the environment of emotional stress.

**Dr Hodgkin**

I feel strongly about this subject and I am sure that every doctor is worried about the amount of tranquillisers that is being prescribed. We all recognise that drugs are useful but there are other ways of helping people. The hospital's job is to create a special therapeutic environment in the hospital, so you cannot expect the hospital staff to come out to general practice and do our job for us. It is up to us to do this job and I would like the community to recognise that the general practitioner has this function.

I feel strongly that we ought to be concerned about this aspect of the behavioural and sociological interactions. We need to cross many more barriers, particularly in our own field; to go out and see what the ecologist, the sociologist, and the business manager are all doing. These and other professional barriers must be crossed because we have much to learn from these people.

**Dr D. L. Crombie**

If I may come back to the practicalities of general practice in a modern culture where the use of drugs is absolutely inherent, I think we are only talking about a relative diminution of drug therapy rather than its abolition. I find that a patient is more likely to be depressed than anxious, so that there is a lot to be said for using one of the tricyclic compounds. They can be rather unpleasant in giving the patient a dry mouth, but they certainly help the depression. I have never had anyone come back for more tricyclic drugs once they are cured and I have never known anyone becoming addicted to them. You can usually find a tricyclic compound that is slightly sedative, if this is needed.

**Chairman**

Every time that a general practitioner says to his patient "you should have come to me sooner", he is implying that something could have been done and the patient automatically takes this to mean that if he comes early enough there will be a cure for everything. The number of cures 50 years ago was limited to three or four, and luckily for us there are rather more now. We sometimes tend to overlook the fact that many patients come to our surgeries for advice and it would be interesting to see how many people could really go away without a prescription.

**Floor**

I would like to make a suggestion, borrowed from the world of moral philosophy, which is that the disease affecting most people is a lack of purpose, as described in the book by

Viktor Frankl (*The doctor and the soul*. New York, 1955). When we see a patient who has lost his sense of purpose in life, we must try to help him regain this as soon as possible.

**Dr M. Schapira—Keighley**

Dr Pinsent mentioned the presence of copper in certain conditions, particularly Wilson's syndrome, but it is also found as ceruloplasmin in the later stages of pregnancy and always in women who have taken oral contraceptives. Has Dr Pinsent noticed whether there is the same copper content in other parts of the country as there is in Devon?

**Dr Pinsent**

I do not know of any investigations into copper during the varying stages of pregnancy, but the probable areas affected would be the South-west of England, Anglesey, and parts of Wales. There are smaller deposits of copper and lead in Scotland as well. It should not be difficult to get test materials from these areas and to arrange for the appropriate estimations to be performed. If Dr Schapira would like to put his ideas in the form of a protocol or a simple medicogeographical project we could investigate the possibility of such a survey.

**Dr M. T. Sweetnam—Stoke-on-Trent**

I would like to refer to this question of prescribing and overprescribing. We all understand this problem but we all tend to forget the time factor. It is very easy to sit here and this 'Oh yes, on Monday I will go down and see that woman who wants 3,000 capsules and I will have a good talk with her', but when Monday morning comes there are about 30 of these women queueing up. What can one do with these problems?

**Dr J. McClone—Glasgow**

I was impressed by Professor Smithells' reminder that man is a moral animal and I am tempted to suggest that possibly the worst form of pollution, at this moment, is the pollution of ideas. Venereal disease, broken homes, and neurosis are all on the increase, while drug addiction and self poisoning are almost at the same mortality level as road accidents. Should we as doctors be more outspoken in our opposition to such ideas?

**Dr J. S. Scobbie—Glasgow**

This symposium has been a valuable exercise in analysing some of our ideas. I am sorry that Dr Howells is not available, because I am slightly critical of some of his attitudes towards the unloving family. I feel that he has been in the unfortunate position of only seeing the very unloving families. I am sure that we all, as family doctors, have unloving and disharmonious families in our practices. Some of the children of these families are happy, work well, and eventually have their own families.

Dr Keith Hodgkin is right to be analytical and I am sure that it does a lot of good. Dr Hodgkin has done more good for his patients than almost any other doctor. I would like to confirm Dr McClone's statement on the moral issues. This is the budding issue of today and we who come from North of the Border are very aware that we need to give a moral lead.

**Dr W. V. Anderson—Scarborough**

One of the problems of practising in Scarborough is that we have twice the national average of elderly people. This is due to the large number of retired people from the West Riding, and the biggest problem for them is to try and settle into the local community. The people who successfully integrate are those who join the local groups, thereby replacing their previous purpose in life with a new one. Those who do not settle tend to suffer from depression or psychoneurosis and these people do not join the local groups but remain isolated.

It has not been mentioned but there are some physical causes of depression such as the relationship between patients taking oral contraceptives, who develop pyridoxine deficiency, and the depressive syndrome. This problem may well be related to the type of trace element effects mentioned by Dr Pinsent.

#### **Dr Pinsent**

There are many consequences of depression that need to be recognised. They may be due to the inbreeding of a population, or even to some environmental factor. There may very well be a relationship between trace metals and depression.

#### **Dr W. W. Fulton—Glasgow**

It is interesting that Dr Donald Crombie suggests that we might give tricyclic anti-depressants, which are respectable, while tranquillisers are not. Mr President, you said that we should consider how often we could see patients without having to prescribe. This is very laudable attitude which I adopted when I went into practice. I spent a lot of time with my patients, trying to manipulate their attitudes and avoiding giving drugs. I became more depressed than my patients because of the sorrowful way in which they left my surgery as if to say 'so you cannot do anything for me, doctor'. In time we come to be realistic; patients' demands need to be met unless we wish to appear to break faith with them.

We cannot escape the modern climate of opinion and Dr Hodgkin has rightly said that mass publicity may slowly alter this situation, so that people do not expect unessential medication. I personally do not feel guilty about prescribing tranquillisers and the phenothiazines, which are absolutely essential if schizophrenics are to be maintained in a state of remission. The same also applies to thyroid, vitamin B, or insulin, and many drugs.

I believe that there are some people whose attitudes and behaviour have been so damaged by either their upbringing, heredity, or the environment that they cannot change. It has become our duty to try and modify these reactions between person and environment in the very broadest sense. If we cannot modify the environment within a reasonable period of time, we may be able to modify the patient's reaction to his environment.

Dr Howells told us that we may be able to buy time for the patient until his environment can be modified. It may take three or four years to change things, so why should we deny the patient the comfort of having protection from the environment. I have now rationalised my attitude to this problem and I feel that there is a place for tranquillisers.