Contemporary Themes

Doctors and the global population crisis*

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All that I have read about Dr Edward Holme indicates that he was a wise and prescient man. Had he been alive in 1977 he would assuredly have been concerned about the general state of the planet and about the numerous problems afflicting mankind. He would have seen the earth grossly overpopulated, with its finite resources, particularly oil and natural gas, inexorably running out. He would have noted that the politics of scarcity were gradually replacing the politics of affluence, and he would have become increasingly aware of the necessity for jettisoning policies of unrestricted economic growth. He would have been deeply concerned about the spread of nuclear reactors around the world and of the possibility of individual nation states—some under capricious, irresponsible, and tyrannical leadership—being in a position to fabricate atomic weapons. As a practising doctor of the 1970s who still remembered Hiroshima and Nagasaki, he would have been only too aware of the medical effects of a nuclear holocaust and especially of the proclivity of ionising radiations to cause cancer and destroy genetic integrity.

Yet overpopulation might have concerned him most of all, for it is the global dilemma pressing most acutely on the practice of medicine.¹ Doctors have, of course, contributed to some extent to the overpopulation syndrome through their capacity to assail disease and eventually to conquer maladies that in the past had ravaged humanity. Holme would undoubtedly have recognised the uniqueness of the current population situation for never before have human numbers been increasing so rapidly. During the decade of the 'seventies, for example, births have been exceeding deaths by about 70 million, a figure greater than the combined dead in the first and second world wars. By 1977 the earth's population was not far short of 4100 million.² It was growing by 1.8%, a year and by 1990 could have risen to 5000 million. Although very recently there have been signs of a slight slowing in the world's population growth rate,³ it would be chimerical to expect an early stabilisation in global numbers. Population growth has its intrinsic momentum, which in recent years has been very considerable. As a result, even if the developed world reached the replacement level of two children per family by 1980 and the developing countries by AD 2000, the sheer inertia of the demographic process would dictate that global population would not approach a plateau until the world total had risen to about 8000 million. Probably, however, the replacement level will not be attained until AD 2020

at the earliest. If this is so, the earth could well be called upon to support 11 000 million people before stabilisation is eventually achieved.⁴

Until very recently, the population situation in the developed and developing worlds has been as different as night is from day. Since the end of the second world war a political Iron Curtain has separated East from West. During the last two decades, another Iron Curtain—that of demography—has divided the rich from the poor nations.

Population scenario in the developed world

The USA, Canada, Japan, Australia, New Zealand, non-Communist Europe, and the Eastern bloc are the major developed nations. Among them they house about one quarter of humanity, and the area as a whole has a certain homogeneity. Most countries within it are enjoying the material abundance associated with industrialisation: literacy rates are high and diets, health, and medical services are good. Even in a time of economic recession, as has happened during the past five years, there is a relative plethora of occupational opportunities.

Another highly significant characteristic of the developed world is that fertility rates have been falling for at least a decade, and in a few countries are now near or below replacement level.¹⁻⁵ The decrease in fertility has been quite unrelated to ideology. The lowest birth rate in the world in the mid-'seventies (10 per 1000) is in the staunchly capitalist Federal German Republic: over the Berlin Wall in Marxist East Germany the figure is only one point higher.² Birth rates of 18 per 1000 or less have been reported from countries with political systems as diverse as Bulgaria, the Netherlands, Yugoslavia, Belgium, Switzerland, and Finland. In Western Europe only three nations—Norway, Iceland, and the Republic of Ireland—have maintained their fertility during the 'seventies. Within the Eastern bloc, birth rates in Hungary and Czechoslovakia were particularly low at the beginning of the decade. Since then fertility has risen slightly, and this probably reflects the mildly pronatalist policies adopted by these governments.

The scene in Britain is typical of the developed world as a whole.⁶ In 1970 there were 784 000 live births in England and Wales; by 1976 the figure had dropped to 585 000. The average family size in 1970 was 2.5 children; by 1976 it had fallen to 1.8. The birth rate in England and Wales in 1976 was below 12 per 1000 population, and this was the lowest figure since records began many years ago. From the mid-'seventies onwards, British people have married at a somewhat later age; *pari passu* with this change couples have tended to postpone the birth of their first child after marriage.⁷

Population scenario in the Third World

Seventy-five per cent of the earth's people live in Africa, Asia, and Latin America. Eighty-five per cent of births are taking place there; even more importantly, 90% of the additions to the planet between now and AD 2000 will be in this area.¹⁻⁹ Population-wise, therefore, the hinge of history is moving with some rapidity towards the Third World. The effect of this change could be momentous for mankind: it could exacerbate the tensions of the North-South confrontation; it could inflict added stresses on an organisation such as the British Commonwealth; and it could enhance the global realpolitik of the new international economic order.

*Based on an Edward Holme Lecture given in University College Hospital, London, on 19 April 1977.

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India and China are the world's population giants. Between them they house about one-third of humanity. They have six times more people than the European Economic Community, six times more than the Soviet Union, and 30 times more than Britain. The population policies of India and China in the years ahead will considerably affect the quality of life enjoyed by all mankind.^{1 10 12}

INDIA

India in 1977 remains a bottomless pit of overpopulation. Birth rates are still obstinately high (34 per 1000 overall), while death rates and infantile mortality rates are now falling slightly. The Indian population is currently approaching 630 million. By AD 2000, if present tendencies continue unchecked, numbers could exceed 1000 million.²

Yet India has had a population policy for almost 30 years. Its rubric has been family planning, and the programme has used various techniques. In the 'fifties the intrauterine device held sway; in the 'sixties and 'seventies condoms became more popular, as did vasectomy and female sterilisation. The pill, however, has never attained the primacy in India that it has in other Third World countries. The medical umbrella still envelops it: doctors are at the helm and the medication remains rigidly on prescription. Paramedical staff have been very little used in distributing the pill and the "contraceptive inundation" programmes that have featured in several Third World countries have not so far been successful in India. A liberal abortion law was late in making its appearance on the Indian scene. It did not become operative until 1971, and since then the number of terminations performed under the law has been disappointingly small.

Early in 1976 it seemed as though the Indira Gandhi Government was viewing population growth in India with a feeling akin to desperation. The Government raised the minimum legal age of marriage from 15 to 18 for women and from 18 to 21 for men. Soon after, the Indian parliament started a debate on the issue of compulsory sterilisation after three children.¹¹ The State of Maharashtra, in which birth control facilities were reasonably good, was to be the site of the experiment. Many leading members of the Government including Mrs Gandhi herself, her younger son Sanjay, and the Defence Minister, Bansi Lal, emerged as strong "compulsionists."

But the Government had forgotten an eternal verity—namely, that, of all forms of human activity, reproduction is the least susceptible to external coercion. Nemesis was not long delayed. The election of March 1977 was dominated by the sterilisation issue. Indeed, it seemed as though the integrity of the *vas deferens* had become the epicentre of the campaign. The Indian populace showed its revulsion for compulsionism in any form. This was not surprising because for much of this century Indians have been reared on the gentle non-violence of Mahatma Gandhi and on the mild democratic socialism of Jawaharlal Nehru. They had not experienced the barbarism of someone like Hitler, the sadism of Stalin, or the tyranny of Idi Amin's Uganda or François Duvalier's Haiti. Given such a background, the result of the election was entirely predictable. The Congress Party, in power since Independence, was toppled, and its most egregious defeats occurred in regions of the country in which the sterilisation campaign was at its most intense. Virtually all the "compulsionists" in the Cabinet including Indira and Sanjay Gandhi and Bansi Lal were decisively defeated. The incoming Janata Party, a coalition united only in opposing Indira Gandhi's state of emergency, announced soon after taking office that it would compensate those who had been compulsorily sterilised.

There are numerous reasons for the singular lack of success of India's population policy.^{1 12} Family planning programmes have been operated disproportionately by doctors, most of them Western in training and orientation; insufficient use of paramedical staff in their implementation has already been mentioned. But by far the most important factor has been inadequate appreciation of the intimate relationship existing between population and the whole process of socioeconomic development.¹³ John D Rockefeller, the American philanthropist and formerly one of the world's foremost zealots for family planning, recognised this defect when he argued at the World Population Conference in Bucharest in 1974 that rapid population growth was "only one among many problems . . . ; it is a multiplier and intensifier of other problems rather than the root cause of them." What Rockefeller really meant was that, for a population policy to be effective, its scope must be broad and it must be solidly placed in an appropriate social, economic, and religious context. The Indira Gandhi Government ignored the dictum so often reiterated at Bucharest that if you took care of the people the population would

take care of itself. But the people themselves did not forget the maxim and the *dégringolade* of the Congress Party was the immediate result.

CHINA

The China of 1977 presents a very different picture.^{1 3 12 14} China is the world's most populous country with numbers well over 800 million. Since the establishment of the People's Republic in 1949 the supreme task of the Government has been to feed a large and growing population at a reasonable nutritional level. That it has been able to achieve this objective without placing undue strain on world food markets indicates the success of its population policy.

Throughout the whole of its tenure of office the Mao Tse-tung Government showed considerable interest in and concern for the reproductive proclivities of its citizens. As early as the 'fifties the Great Helmsman himself proclaimed that marriage should be late (not before 26 for men, not before 23 for women); the two child norm in marriage was favoured; by exercising restraint in reproduction the couple were seen to be "serving the fatherland" and to be showing evidence of a "raised political consciousness." Divorce became rare in Mao's China; so did illegitimacy. Premarital virginity is still a rubric of society, and the strong emphasis on women's rights and female emancipation has undoubtedly carried with it strong anti-natalist overtones.

Paramedical staff, particularly the "barefoot doctors," have been the spearhead of China's family planning programme for about 20 years. They deliver the services; they provide instruction in the use of contraceptives including the pill; when necessary, they can perform minor operations such as early abortion and vasectomy. An outstanding feature of China's birth control programme in the late 'seventies is its high degree of eclecticism. The oral contraceptive pill has attained a pivotal position. Next to the pill, abortion is probably the most important component of the programme. But other techniques of birth control have not been neglected, and these include intrauterine devices, condoms, spermicides, diaphragms, and vasectomy.

Phenomenonally low growth rates have recently been reported for China's population. One figure quoted by the prestigious Worldwatch Institute¹⁰ is 1.1% a year, and this is comparable with figures for developed countries such as Canada, Spain, and Australia. How closely the Worldwatch figure corresponds to reality is a matter of some doubt. But it seems virtually certain that population control in China is much superior to that of its Asian neighbours such as Pakistan, Bangladesh, the Philippines, Malaysia, and Indonesia, all of which boast figures ranging from 2 to 3% a year.

Doctors and overpopulation

It behoves doctors to be particularly concerned about the population issue. The medical profession has traditionally had a strong sense of the forward surge of history. Doctors are by nature caring people and, as such, are deeply concerned with the type of world that future generations will inherit. Furthermore, doctors are in a position actually to *do* something about population and to do it now. They can give counsel vis-à-vis contraception; they can perform male and female sterilisations; an increasing number of them in Britain and elsewhere are adopting a more liberal stance on abortion and are prepared to terminate pregnancy for social as well as for purely medical reasons.

Before the opening of the decade of the 'seventies, many doctors had a vague unease about the global population problem. But feelings were confused and inchoate, and it was left to those from other disciplines to take the lead. The formation of the Doctors and Overpopulation Group in Britain in 1972 was the catalyst for a profound change in attitudes.¹⁵ It provided a rallying point for medical opinion; it channelled the latent idealism of the profession; and it soon came to straddle the medical spectrum from the young student to the most prestigious of elder statesmen. Five points constituted the Group's credo as originally enunciated: the Government must acknowledge that a population problem existed in Britain; family planning services should be greatly expanded, as should facilities for male and

female sterilisation; the abortion law should remain liberal; women's rights should be upheld; and population education should become a sine qua non in all centres of higher learning.

By 1977 virtually the whole of our credo had passed into the conventional wisdom of society.^{1 16} A minister for population affairs with Cabinet rank had been appointed in 1973, and at the World Population Conference he proclaimed that the British Government welcomed the falling birth rate in the country as a step towards population stabilisation. Contraceptive practice had extended its tentacles into ever-broadening strata of society. Family planning had become a responsibility of the National Health Service, and this had manifestly increased its gravitas; about three million women were currently "on the pill" and by mid-1976, the medical monopoly in prescribing the medication was being seriously challenged.¹⁷

The abortion Law had remained liberal. Two Parliamentary Bills associated with the names of Gyll and White and veering towards restrictionism had fallen by the wayside; a further restrictive Bill sponsored by William Benyon seemed unlikely to get off the ground. The Society for the Unborn Child (SPUC) was well financed, emotive, and vociferous; yet by mid-1977 it had failed to storm the ramparts and its subsequent path could well be downhill. Women's rights had prospered since 1972. International Women's Year in 1975 had proved a stimulus in this direction and during that year the Equal Pay and Sex Discrimination Acts in Britain had passed into law. Only on the front of population education had progress been disappointingly slow. Medical curricula were still crammed with various forms of specialism; interdisciplinary topics with global implications were still not receiving the emphasis that they merited.

Doctors with an interest in population problems have much to occupy themselves with in the future. Pressure must be continuously maintained on the Government to restrain population growth; at all costs, the siren song of pronatalism—particularly attractive to elected representatives and aspirant politicians in an era of falling fertility—must be emphatically rejected. Contraceptive services still require attention, and our group has recently called attention to the advantages of the condom in preventing teenage pregnancy.¹⁸ Abortion facilities need improvement at the national level. The NHS is still not meeting the demand, and about half of our residents are still having their pregnancies terminated in non-NHS establishments. Gross regional inequalities persist vis-à-vis abortion. These are often due to the personal prejudice of senior medical staff, and it seems to me entirely inappropriate that such individuals are in a position to dictate policy for a whole region of the country.

We live in an aging Britain.^{6 19} Doctors with an interest in population must grasp this nettle and must not fear the geriatric tide—and a tide it certainly is. In 1931 the demographically determined dependency ratio was 51; by the mid-seventies it had risen to 68. From 1975 to 1985 the number of over 75s in England and Wales is likely to rise by 20% a year, and this is similar to the overall population growth rates in Third World countries, such as India, Sri Lanka, and Pakistan. It is almost a truism in 1977 to state that reallocation of medical resources must follow the lodestar of geriatrics. Certainly, population-orientated doctors should be in the vanguard of those pressing for considerable improvements in hospital and community services provided for the elderly.

Doctors should not fear that a society in which the numbers of elderly people are increasing both relatively and absolutely will of necessity become dull, ultraconservative, and highly resistant to change. The lesson of history is certainly not in keeping with this view. During the whole of the twentieth century the median age of the population in developed countries has been rising. Yet the past 77 years can scarcely be described as stagnant: instead, they have been among the most varied and tumultuous in the whole of human experience. The Report of the US Population Commission,²⁰ for its breadth of vision and eclecticism of scope still one of the classics of the decade, faced up squarely to this problem. One of its major conclusions

was that the many social and economic advantages of population stabilisation definitely outweighed any disadvantages that might accrue from a gradual increase in the average age of the population.

Dr Edward Holme, whose name is commemorated in this lecture, was a leading figure in medical circles in Manchester. He was also no mean historian and somewhat of a philosopher. Could he be vouchsafed a view of our overcrowded planet in 1977 he would undoubtedly have lauded British doctors for the stance which they have taken and are continuing to take on an issue that is closely bound up with the hopes, aspirations, and quality of life of future generations.

References

- ¹ Loraine, John A, *Syndromes of the Seventies*. London, Peter Owen, 1977.
- ² Population Reference Bureau, *World Population Data Sheet*, May 1977.
- ³ Adamson, P, *New Internationalist*, No 52, June 1977.
- ⁴ McNamara, Robert S, Address to the Massachusetts Institute of Technology, April 1977.
- ⁵ Loraine, John A, *Contemporary Review*, 1977, **231**, 29.
- ⁶ Loraine, John A, *Update*. In press, 1977.
- ⁷ Hawthorn, G P, *Research in Reproduction* 9, No 1, 1977.
- ⁸ Brown, Lester R, *In the Human Interest*. New York, Norton, 1974.
- ⁹ Loraine, John A, *Lancet*, 1976, **2**, 621.
- ¹⁰ Brown, Lester R, *Worldwatch Paper* 8, October 1976.
- ¹¹ *People*, vol 3, No 4, 1976.
- ¹² Loraine, John A, *Contemporary Review*. In press.
- ¹³ Loraine, John A, *International Journal of Environmental Studies*, 1975, **8**, 83.
- ¹⁴ *People*, vol 3, No 3, 1976.
- ¹⁵ Anderson, J A D, et al, *British Medical Journal*, 1972, **1**, 108.
- ¹⁶ Loraine, John A, *Family Planning*, 1976, **25**, 23.
- ¹⁷ Department of Health and Social Security, *Report of the Joint Working Group on Oral Contraceptives*. London, HMSO, 1976.
- ¹⁸ Lester, J, and Loraine, John A, *World Medicine*, 1977, **12**, 57.
- ¹⁹ Owen, David, *In Sickness and In Health*. London, Quartet Books, 1976.
- ²⁰ *Report of the Commission on Population Growth and the American Future*. Washington, US Government Printing Office, 1972.

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Can soft (hydrophilic) lenses damage the eye?

Yes. When soft lenses made of gas-permeable material became available it was thought that trauma to the eye tissues would be minimal. But we now know that large soft lenses will cause corneal oedema and occasionally neovascularisation of the corneal stroma. Fibroblastic invasion and cellular reaction in the cornea are also possible. The necrosis of epithelium leading to sterile abscess and, unfortunately, infection is a rare but tragic outcome. It is possible to lay the blame on manufacturers, practitioners, and the patient since problems may arise at any phase of using soft contact lenses. This constant wearing of unsuitable lenses and use of infected solutions are but two examples among many. But by far the greatest problem leading to eye damage is spoilage of the soft lenses after several months of use. This is related to manufacture and materials and also the patient's tear and lid secretions. Often only a new lens will ensure comfort and safety.

A patient customarily eats the new shoots of bracken in the spring. He cuts them while they are still very soft, cooks them, and eats them like asparagus. He enjoys them but has asked me if they could do him any harm.

The answer may be found in recent correspondence in *The Times*.¹⁻³ Animals have been poisoned by eating large quantities of bracken, owing to the presence of an enzyme that destroys thiamine.³ The enzyme is destroyed by heating, however, and, provided they are well boiled, bracken shoots are harmless.

¹ Jones, D, *The Times*, 4 June 1977.

² Missen, G A K, *The Times*, 10 June 1977.

³ Sinclair, H M, *The Times*, 20 June 1977.