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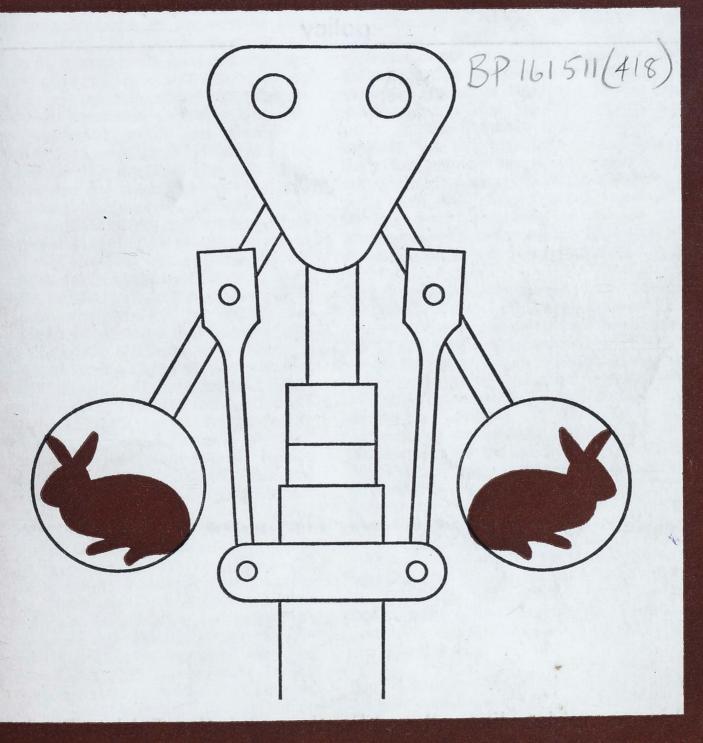
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international comparisons in social policy

fabian tract 418 population policy: a modern delusion

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1. introduction

The world's population is now growing at about 2 per cent per annum, which implies a doubling every 35 years. The populations of the more developed societies, however, are only growing at about 1 per cent, doubling every 70 years, and some, like that of the United Kingdom, are growing at only 0.3 per cent or less, doubling every 231 years or more, although it is suggested, at least for this country, that this rate will rise to about 0.5 per cent by the end of the century. (Office of Population Censuses and Surveys, Population projections number 2, 1971 to 2011. London: 1972: HMSO.) The variations in the rates for the developed countries are considerable, but they pale beside the variation in opinions about their consequences. At one extreme, Paul Ehrlich has said that he would take even money that England will not exist by the year 2000, for reasons that have more to do with world population growth than with local expansion, but for reasons that are ultimately demographic; and at the other, Governor Williams of Arizona is recorded as having expressed the view that "the exploding population has a long way to go before it reaches the optimum," indeed, that the curve of population growth reaches the end "only at infinity." A recent public opinion poll in Britain revealed a sizeable majority who felt that this country was already overcrowded.

Official views are more cautious. The Select Committee on Science and Technology, reporting in 1971, expressed concern at the present rate of growth in the United Kingdom, and concluded that "the government must act to prevent the consequences of population growth becoming intolerable for the every day conditions of life." The government replied by insisting on a distinction between action designed to adjust to population increase and action designed to affect that increase itself, while conceding to pressure by setting up a "mixed panel of experts" to consider all aspects of the question.

In March 1970, President Nixon established the Commission on Population Growth and the American Future, which was to keep track of population trends and their social impact and to recommend

ways of adjusting to them. The House of Representatives insisted on two riders to this brief, one that the commission weigh the environmental and resource implications of population growth and the other, more significant, that it seek ways of achieving a population level in keeping with the ethical values and resources of the United States. The representatives were no doubt prompted to such an insistence by the extraordinary explosion of pressure groups in this field in the late 'sixties, and by their mail. Public opinion polls in the United States record a majority of the population as agreeing with the proposition that "America is rapidly approaching a point where she will have too many people, and this coming over population is one of the greatest threats today to the future economic and social well being of the country."

The president's commission reported in March 1972, concluding that there was no economic case for a rising population, that there was a significant proportion of unwanted births the elimination of which, requiring better birth control programmes, would go a considerable way toward reducing the "surplus" of births that contributes to the natural increase of the population, and that there was some evidence from recent trends in American fertility that the ambitions of those who wanted to control population growth would be realised without the implementation of any direct policy at all. Even the most conservative 1970 projection of 1971 births in the United States was too high by 100,000, a factor of 3 per cent or so, and fertility there has now just dropped to a level below that needed for replacement in the long run.

For a variety of reasons, we in this country tend to be more aware of what is happening in the United States than of what is going on in Europe. With respect to opinions about population growth in the developed nations, this produces a more than usually misleading impression, an impression that perhaps all, or nearly all, such nations are beginning to worry about excessive growth. In fact, Britain and to some extent the Netherlands are unique in Europe in this respect. (But see

Dr. Mansholt's reactions to the Club of Rome report in *The Guardian* 11 April, 1972. The report is sumarised in Dennis Meadows' *The limits to growth*, Cambridge, Massachussetts: 1972: MIT press.)

European comparisons

The reasons for this are easy to see. By 1971, the annual birth rates in Denmark, Sweden, Finland, the Federal German Republic, Czechoslovakia and Hungary were all below what would be needed for replacement in the long run, and although the rates in other countries in this year were above replacement, those in Austria, the German Democratic Republic, Portugal, Switzerland and Jugoslavia were only just so, and had been displaying a fairly consistent decline for several years. By themselves, of course, these rates do not signify much. They could merely indicate a temporary postponement of births which will be made up in the near future; but they could also signify a real (if slight) change in fertility patterns, one that makes a crucial difference to the long term prospects for the populations in question. This is the prediction of at least one official study. (The rates are compared by J. Bourgeois-Pichat in Population [Paris] 1972. The predictions are made in The European Community, the UK, and world population trends, Brussels: 1971: EEC. A recent NATO study has expressed satisfaction, nevertheless, with Europe's demographic imbalance between East and West, taking comfort from the fact that growth seems less assured in the East.)

Thus, it is not surprising that Sweden, much more liberal in birth control policy than a country like France, and probably much more successful in making that policy work than we are, insists that none of its actions is taken with a population policy in mind. In fact, one might interpret things like the generosity of public loans for housing to the newly married as an incentive to fertility, since several commentators agree that the great shortage of roomy houses for sale or rent in Sweden is a disincentive to larger families. Similarly, there is a liberal birth control policy in eastern Europe, consistent with

a belief that it should be as easy as possible for women to get work and continue at it, that couples should be able to determine their own fertility and that the state should help them achieve this, and that they should have as much social security as possible. Where a hint of population policy does appear, it is always in the direction of wondering how fertility can be boosted rather than restrained; this seems the most plausible interpretation of the anxieties about the ageing of the population (brought about by rapidly declining fertility) and of the marked instability of recent attitudes towards abortion, particularly in the German Democratic Republic and Roumania.

France, therefore, long famous for its pro-natalist policies, does not now seem so extraordinary in the wider European context. It is true that article 5 of the new loi Neuwirth, the law which abrogated the more restrictive legislation passed in 1920 and which was itself passed in 1967, asserts quite flatly that "all anti-natalist propaganda is forbidden," although it is now permissible to manufacture and sell contraceptives, subject to their being distributed through authorised and regulated channels. Finally, Japan, after a transition from relatively high to relatively low rates of fertility and mortality, only exceeded in its speed by some of the less developed countries of eastern Europe, is now officially committed to raising fertility to the extent of escaping from the trend, which began in 1957, of a rate of natural increase too low for replacement in the long run.

Thus, comparisons both within and beyond Europe (with the exception of the United States) show that Great Britain is virtually unique in displaying a widespread concern with the possibility of over population, and thus unique in having a government which has been forced to make at least a token response to such a concern. Nevertheless, the contrast between the United Kingdom and the United States, on the one hand, and other developed nations, on the other, should not be drawn too sharply. While there are strong lobbies of unofficial opinion both here and in America urging a reduc-

ion in rates of growth and even a reduction in total population size, as far as official opinion is concerned the differences are slight. None of the countries which is worried about too slow a rate of growth, or even a potential decline, like France, Japan and the republics of eastern Europe, makes fertility control really difficult (Roumania may be an exception to this), and many make it much easier than do we or the United States; and, Japan aside, the one country with an explicit population policy, France, has one for reasons that are largely historical.

Of course, this proves nothing. Wisdom in these matters is not decided by majorities, and it may well be that each country is taking a sensible short or medium term course in the light of its own conditions. In the long run, however, which may be as long as a century or two, any society which does not realise that it will have to ensure a declining and eventually zero rate of growth (in practice, an average of zero over several decades) has its head in the sand. At present rates of growth (and even those societies which

now have very low birth rates are still growing), the populations of the more developed societies will be expanding at the speed of light in a few thousand years' time. That may be Governor Williams' infinity, and if so, it is not a practical one.

The question is not whether we shall have to achieve zero rates of growth at all, but when and how we shall have to do this. It may turn out to be the case (as the editor of Nature seems to believe from the latest American figures, and as one or two optimistic American demographers also believe) that a natural self regulation at a new level is just beginning to appear; or it may be the case, as students of animal populations tend to think, that all industrial populations have lost the technique of autonomous regulation and that we have to begin to think about taking deliberate action to curb and even stop further growth. These questions are not answerable at the present, but much can be gained from tackling them, and to this end it is necessary to look at the prospects of population growth in this country for the next two or three generations.

TABLE I
PRESENT PROJECTION OF AGE GROUP COHORTS BY SIZE AND
PERCENTAGE

E	0-14	15-44	45-64 males 45-59 females	65+ males 60+ females	averages
1971 pop. 000s	13499	21646	11624	8899	55668
percentage	24.2	38.9	20.9	16.0	100.0
1981 pop. 000s	13400	23517	10841	9711	57739
percentage	23.2	41.2	18.8	16.8	100.0
1991 pop. 000s	14219	25477	10735	9832	60263
percentage	23.6	42.3	17.8	16.3	100.0
2001 pop. 000s	14840	26625	12171	9452	63088
percentage	23.5	42.2	19.3	15.0	100.0
2011 pop. 000s	15151	27499	13597	10089	66366
percentage	22.8	41.4	20.5	15.2	100.0

Source: Office of population censuses and surveys, op cit, table 15.

2. population trends

The government actuary and the registrar general are the first to admit that their projections are tentative. It is essential to understand that these projections are projections, and not predictions. They are not based upon a law or set of laws about the causes of fertility, migration and mortality. They are merely what they say, projections from present trends. It is for this reason that they vary so much. The variation is clearly more serious for the distant future than for the nearer one, because fewer of the people who will be alive then are already born; although recent American experience reveals how wrong even short term projections can be. All the estimates of the 1968 population made from 1960 onwards were within one million of the actual figure, or within 2 per cent; but the variation in the projections for 2000 made between 1960 and 1971 has been of the order of 11 million, rising from 63.8 million in 1960 to 74.7 million in 1964, falling back to 63.1 million in 1971. The most distant projection, for 2011, is for a total of 66.3 million.

The possible contribution of changes in assumptions about mortality to this variation is negligible, and may be left aside. It is changes in the assumptions about migration, and above all about fertility, that have been crucial. In 1960 it was assumed that there would be a net loss of 30,000 emigrants a year, for as long as could be foreseen; in 1971, that this would be higher, at 50,000; whereas in 1965 it was assumed that there would be a net gain of 10,000 a year, declining gradually to an exact balance of zero. However, this accounted for only about 2 million of the increase to 2000 which was foreseen in 1965. The rest was due to changes in the assumptions about fertility. The 1965 projections, the highest of all, were made at a time when the birth rate had been increasing steadily for over ten years, and it seemed reasonable to assume that not only would there be absolutely more mothers in the next generation, but also that each of these mothers would have, on average, more children than her own parents. Births declined again after the mid-'sixties, however, and with them, the projections. Although no extra information was systematically incorporated into the projections, the causes of the birth rate (apart from purely demographic ones) being almost wholly unknown, it was assumed that the spread in the use and the effectiveness of contraception would dampen fertility.

The first information used in making the projections other than that of past trends was incorporated in 1968. This came from a specially commissioned survey in which a random sample of married women under the age of 45 were asked about their expected fertility. Such expectations had proved extremely accurate in predicting the aggregate of births in an American population over a five year period (although the accuracy was to some extent due to a fortunate cancelling of errors), and it seemed worth trying here. The expectations would obviously be more reliable for women nearer the end of their fecund period and for the short term, and such qualifications were fully considered. The upshot of the survey was an average expected family size of 2.5 children, higher for couples married in the late 'fifties, a little lower for those married in the early 'sixties and lower still, although again by a very small margin, for those married in the later 'sixties. This was still significantly distant from the figure required to reduce growth altogether in the long run, a fraction over 2.1, and more distant still from the survey couples' average ideal family size, assuming no worries about money and housing and so forth, which was 3.5.

David Glass, in his submission to the select committee, was sceptical about the results of such interviews, suggesting that they reflected perhaps transient feelings at the time of the interview more than any realistic plans or ideals for the future, and in this he is probably correct. The Americans too have since become disabused of the utility of this method of inquiry; but it is perhaps better than nothing, and the government actuary and the registrar general are always clutching at straws, albeit with great caution, in making their projections. So, they incorporated it. A follow up of a selection from the main sample was carried out in late 1972. Meanwhile, answers to a quesion in the General Household Survey have prompted the Office of Population Censuses and Surveys (OPCS) to reduce heir estimate to 2.33.

Of the three components of population growth the one we can predict with the reatest assurance, namely mortality (alhough it is plain that there is opportunity or variation here too), is also the one whose variations are the least important. t is upon future fertility trends that the uture population rests, and one is almost completely in the dark as to what these rends will be. Will everyone get married, nstead of the present 95 per cent, or will we revert to the older pattern of a lower ate of marriage? Similarly, will people again defer their marriages, as they did in he long period that stretches from somewhere before 1500 to the late 1930s, or will they continue the recent trend of young marriages, a trend which, with the everage age at marriage for women fallng into the period of highest fertility, has meant not only slightly shorter generations but also slightly larger family sizes? Will people want more children or fewer? Will they space them any differently? Will more of them use more efficient contraceptives more often? We do not know. If we did, the government actuary and the registrar general would have used the knowledge in their projections, and would be less open to the charge that the long term projections made in 1971 are likely to be no more accurate than those made in 1965 or 1960. Even if we did know, however, our problem would not have been solved; the burden would have merely been shifted to those people who have in turn to provide predictions of the causal factors themselves.

This explanation of the uncertainty behind the official population projections reveals, the relative futility of trying to answer the question of whether a population like that in Great Britain today is displaying any autonomous self regulation. More precisely, it shows the futility of searching for an answer precise enough to be of use for projections. We can safely say that at some very general level regulation is occurring. The fall in mortality during the last century would have

meant large and perhaps insupportable families at the prevailing rates of fertility. For this, and other reasons, fertility fell.

difference between pre-industrial and early industrial fertility, on the one hand, and late industrial fertility, on the other, is a crude one. The critical questions are about the variations within what one might call the "late industrial" period, and especially about the variations in completed family size. Put simply, what has happened to completed family size is that the level achieved by couples marrying up to 1920 has been exceeded only by couples marrying in the period after 1950. In the 'twenties, 'thirties and forties, the level was lower, reaching its lowest point in couples who married at the very end of the 'thirties and the very beginning of the 'forties. It now seems likely that the "true" trend, if one may invent such a fiction, is that of the pre-1920 and the post-1950 marriages, and that the lower sizes in the intervening cohorts were the product of the depression and the war. If this is true, then the prospects are dim for a natural fall to that size which would ensure generation replacement and no more, namely 2.1 or so. On the other hand, it may be the case (and demographers who now argue that 2.3 or 2.4 is normal were saying this nearly ten years ago) that the recent rise in projected completed family sizes is merely a temporary reaction by the children of the small families of the 'twenties and 'thirties, and that their children, and generations now marrying, will display a fall again to average families of 2.2 or even 2.1 children. This second thesis is, as I have implied, very slightly less plausible now. The tendency to a slightly larger average family size seems assured, and this is what the projectors have assumed.

The merits and demerits of each interpretation are not really known, which is to say that there is some difficulty for those who wish to argue for an anti-natalist population policy; for such a policy necessarily entails an unaccustomed interference with matters that have hitherto been regarded as private, and it is unlikely that anyone will be enthusiastic about taking firm action without a fair degree of

certainty about the consequences of not doing so. Nevertheless, not to act could well create problems for later generations.

Clearly, the disincentive for action that lies in the uncertainty about the demographic future has to be balanced against the incentive that comes from an analysis of the consequences of present rates of growth upon the future size of the population. However, the demographic future can be considerably affected by altering (by whatever means) the parameters of marriage, birth control and thus fertility.

marriage

Both the proportions ultimately marrying and the age at which people marry are important. The first will directly affect the size of the future generation, unless it is assumed that for every marriage not taking place there will be a corresponding rise in the fertility of those that do. The second, while also perhaps having some effect upon the total size of the future generation, will directly affect the length of the period between generations. The importance of the proportions marrying can be illustrated by the fact that only in 1961 did we recover the number of children present in the population in 1901. At that time, fewer women married and they married rather later than today, but the ones that did had larger families.

Now, almost all women marry, and a good number of them marry earlier, although those that do have somewhat smaller families. Thus, if we were to achieve a situation in which the total proportion who married, as well as the age at marriage, was lower, but in which marital fertility (the number of children born to each family) remained the same, we would achieve a correspondingly lower birth rate. Now, whatever the causes of the variations in the proportion ever married, and they are not entirely clear, it is plain that a public policy to discourage marriage altogether (which would pre-suppose an understanding of the causes) would be quite unacceptable. The only possibility in this area is to try and increase the age at marriage.

In a non-contracepting population it is obvious that fertility will be directly associated with the length of marriage, with what demographers refer to as the "exposure to risk" of fertility; but the relationship does not altogether disappear in a contracepting country such as Britain. Women who married under the age of 20 in 1951 had had 2.87 children after 15 years. Those who married between the ages of 20 and 24 had had 2.19, and those who married between the ages of 25 and 29, 1.85. The estimated completed family sizes of these three groups are 3.11, 2.28 and 1.87 respectively. The variation in the gap between what they have now and what they are expected to have by the end of the fecund period is explained by the fact that those who married late are now nearing the menopause and have little time for more, whereas those who married early have more time. The evidence suggests that women marrying earlier do not want significantly larger families (although one must always be careful of any evidence on such an opaque notion); the conclusion must be that at least some of the excess is the result of contraceptive failure.

contraception

Unless a contraceptive is 100 per cent efficient, and not merely 99 per cent so, and only the pill meets this condition (provided it is taken properly), there are bound to be some accidents. To defer marriage could prevent these, if one assumes that the frequency of coitus is less before marriage than after. If it is not, then married or not the women are exposed to the same risk. In the nature of the case we do not know much about coital frequencies at any time, but from what we do know it is perhaps safe to surmise that the later the age at marriage, the longer the period of regular and relatively frequent coitus beforehand. To delay marriages thus contains its own corrective such that the point of the policy is much reduced. Nevertheless, it would be going too far to maintain that for most groups the rate of coitus is actually higher before marriage, unless marriage is delayed until after 30 or so, and there

vould be some effect. However, would it ustify the almost inevitable difficulty of he policy? The registrar general assumes hat couples marrying after the age of 25 but before 30 in the years after 1970 will have a completed family size of exactly 2.00, whereas those marrying before the ige of 20 will have 2.65 children; but it cannot be assumed that if every woman lelayed marriage until at least 27 we would cease to replace ourselves. Some of hose who marry earlier may do so because they want larger families or want o have children sooner, and vice versa, to that the average completed family size of everyone in this hypothetical situation night be higher, the women maintaining nost of their original ideas about children. All we would lose in that case would be a certain number of accidents.

These "accidents" or "unwanted" children are the product of ineffective contraception. The terms have to be used with caution. A conception may be unwanted, but as the pregnancy progresses this lack of enthusiasm may change and the eventual child become most indisputably wanted. The powers of rationalisation are strong, and for the sake of the children themselves it is fortunate that they are. Nevertheless, the fact remains that at the time of conception itself certain pregnancies are unwanted. An American study which had some influence on their commission for population growth found that 20 per cent of the pregnancies occurring to women in the United States in the period 1960 to 1965 were explicitly unwanted. The proportion was, as one might expect, only 4 per cent for first pregnancies, but was 45 per cent for sixth and subsequent ones. The rates were all higher for blacks, and, partly due to the contribution of this group, twice as high among the poor and the least educated.

In their study of contraceptive practice in Britain in 1967-68 Glass and Langford found that about 18 per cent of all births were "accidental." This is, of course, not quite the same as "unwanted," for the accident may merely have been one of timing. If this is so, however, then the British figures are markedly lower than the American ones, for there fully 43 per

cent of the wanted births came at the wrong time. The demographic implications of such proportions are straightforward. If it is the case that something like 18 per cent of births within marriage in Britain are unwanted, and that perhaps 30 per cent of illegitimate births are too, then about 150,000 births a year are so. If these did not occur, the present annual rate of population growth would be about 0.04 per cent per year instead of 0.3, which would, of course, be very near replacement and no more in the long run.

Is contraceptive practice not improving of its own accord, however? The answer is a very qualified "yes." Certainly, both Glass and Langford and the opcs study (op cit) have found that about 90 per cent of married couples have used some form of birth control at some point in their marriage. Both agree in finding that the ratio of "effective" to "less effective" methods used is of the order of 2:1, rising, according to the opcs study, to 8:3 for more recent marriages. That is to say, about 30 per cent of couples still use withdrawal, the safe period (or rhythm method), suppositories, or a cap without a spermicide or a spermicide without a cap. Even 41 per cent of marriages begun since 1960 rely mainly on the sheath; as Potts has said, barbers still do more for family planning than all the medical services put together. (M. Potts, "Against nature: the use and misuse of birth control," Medical gynaecology and sociology. 1971.) Only between 21 and 24 per cent of these recently married couples use the pill, and that use has fluctuated in recent years with the periodic scares about its safety. (Ann Cartwright. Parents and family planning services. London: 1970: Routledge and Kegan Paul.) Thus, less than a quarter use the one wholly reliable method of contraception. That most people do use less than wholly reliable methods may not seem significant for the birth rate as a whole; but a simple calculation belies this.

Even if they are using a contraceptive method that is 99 per cent effective, a couple who marry young (as most now do), who have their children close together, and then have 20 years of fertile

life remaining, must realise that their chance of avoiding a pregnancy over that period is only about 0.6. Put another way, there is a 40 per cent chance that they will have an extra unwanted pregnancy. Or, in a population of a hundred couples behaving exactly like this, each of whom wants two children and has them at the beginning of marriage (say, before 25), the average completed family size would be not 2.00 but 2.40. 17 per cent of the pregnancies would be unwanted. The coincidence between this figure and those reported for the United States and Britain is fortuitous. Only 10 per cent of British couples use the cap, which is an instance of a 99 per cent effective method, and they marry at different ages and want different numbers of children. A further 21 to 24 per cent are using a more effective method, the pill, and the rest a less effective one. It is plain, therefore, that the proportion of truly unwanted pregnancies must be higher, in the sense that with 100 per cent effective contraception in 100 per cent of marriages more than 20 per cent of births at present occurring would not occur. Much could be done by eliminating even a fraction of the presently unwanted conceptions.

abortions

More and more are being eliminated, of course, after they occur rather than before. The number of abortions is rising year by year; 127,000 were notified in 1971, of which perhaps 100,000 were to British born women. It has recently been estimated that there might be 150,000 notifications in 1972. There is absolutely no consensus at all about the number of illegal abortions carried out now, but most people put it at between 10,000 and 25,000, although some have suggested that it could even be as high as 250,000.

Nearly half of the legal abortions are performed on single women. An increasing proportion, performed on older married women, are accompanied by sterilisation. The commonest reason given for the operation is the woman's mental health, but this is accompanied in a substantial proportion of cases by considerations of

her other children's health as well. In fact, such grounds tell one little about the actual process of getting an abortion, being convenient catch alls for what are obviously a myriad of different strategies employed by different doctors.

Only now is detailed work being done on the process of getting an abortion, and its findings do no more at present than cast such doubt on any simple interpretation of the official figures for the grounds. (Much of this research will be published by the Lane committee, at present investigating the workings of the act.) It will also doubtless suggest that not all requests for abortion are being met (one estimate is that one in three NHS applications are not), but until we know more exactly what the number of illegal abortions is, and how many women give up completely if refused one under the NHS, we cannot estimate the demographic impact of these refusals, for one abortion performed is not one birth saved. If the woman is using no contraception at all, and this may be true of a large proportion of single women, an abortion will prevent about one third of a birth. That is, an abortion takes eight months or so; conception in the first month, abortion in the third, sterility in the fourth, a resumption of intercourse in the fifth and reconception in the eighth. Whereas a pregnancy may take 22 months; five to conceive (an unwanted pregnancy is presumably not the result of sustained effort, a wanted one usually is), nine to come to term, and eight of post partum sterility.

In a non-contracepting population, an abortion is therefore 8/22 births, or 0.364. In a population using a 95 per cent effective contraceptive, an abortion will prevent 0.877 of a birth. We may therefore assume that the 127,000 abortions notified under the act in 1971 prevented perhaps 23,500 births to single women and 57,000 births to married women, about 80,000 in all. On an approximate calculation, assuming that there 130,000 unwanted births to married women a year and 20,000 unwanted births to unmarried ones and that all these women demanded an abortion, there may be an unmet demand for about

170,000 further abortions (excluding the unknown number at present performed illegally). That is, the increasing abortion rate does not require for its explanation the kind of hypothesis that some entertain, namely that people are being more lax about contraception now that they can obtain a legal abortion more easily. It can easily be accounted for by the increasing realisation that, with constant rates of effective contraception, abortion is a practical alternative to an unwanted pregnancy coming to term; but, this fancy aside, we may say that at present the Abortion Act may be lowering the annual total of possible births by about 80,000, and that it may be the case (caution advises against putting it any stronger) that with an improvement in the liberality of the interpretation of the Act it could do more in this respect.

summary

A statistical summary of the possible consequences for fertility of altering patterns of marriage and birth control would be somewhat artificial, since so much depends upon the assumptions one makes, and an exhaustive comparison of different assumptions is not feasible here. It is clear, however, that if some success were achieved in delaying marriage, in avoiding altogether (rather than merely postponing), a proportion of the unwanted or accidental conceptions, and in terminating more of these accidents that do occur, the cumulative effect would be to reduce fertility to a level very close indeed to that required for replacement and no more in the long run. This is not to say that if we achieved all this tomorrow, the population would not grow at all to the end of the century. We can predict now that there will be about 360,000 marriages to women under 30 in the period 1985-86 as against 337,000 in 1969-70, simply because of the higher number of births in 1955-65 than in 1939-49. If replacement fertility were achieved tomorrow, the population would continue to grow for about 75 years and would eventually stop at a total about 15 per cent larger than the present one. To stop growth altogether the women marrying in the mid'eighties would have to have very small families indeed, and this is not practical. To change the balance of fertility and mortality in a population affects its age structure. This is most evident in the undeveloped countries, where the persistent high fertility after a dramatic drop in mortality has meant in many cases populations in which nearly half the people are under 15. Correspondingly, a lower fertility reduces the proportion at young ages. (See Table I, page 3 for UK figures.)

Broadly, if the official British projections are correct, the proportion of children will remain the same to the end of the century and the proportion of old people will fall. The extent of the change is not, however, very great, and the proportion of people of working age will change even less. If, however, some reduction in marital fertility were to be achieved after 1981, either by raising the age at marriage, or by reducing unwanted fertility, or by a combination of both (and quite apart from changing people's desired family sizes), there would be a fall in the proportion of children and a rise in the proportion of old people. The population would be older, and although there would, in the medium term, be an improvement in the ratio of active to dependent people, this would disappear as the smaller number of children became active (even if they were followed by a generation of roughly the same size) and as the active became old. The age pyramid would have a narrower base.

Very simply, these are some of the likely consequences of attempting to alter the demographic parameters that affect fertility. However, are they desirable, and are they practicable? Clearly, one could set about trying to answer these two very difficult questions in a large number of different ways, but I think that most of the crucial issues revolve around one's views on three propositions: first, that there is no method of evaluation by means of which we can arrive at a balanced view; second, that democratic politics have the wrong time span for a population policy; and third, and apart from this, that we have no acceptable means for implementing such a policy.

3. costs, benefits and optima

Much of the discussion of population policy has revolved around the notion of an optimum size or, more recently, an optimum rate of growth. Both are attractive, but neither is satisfactory as a method by which to arrive at a target, one because it is too simple and the other because it is too complex. In their simplest form, they are both essentially economic notions, but since they have their roots in the utilitarian assumption that utilities can be measured, compared and summed, they are, in principle, applicable to costs and benefits other than economic ones.

An optimum population is a population of a size at which the returns to labour are greater than they would be with any smaller or any larger number of people. In calculating it, it is assumed, unrealistically, that both technology and the amount of capital are constant. Neither assumption is at all valid for an industrial society, and the second assumption is probably not valid for any society at all. An optimum rate of population growth is that rate of increase at which the rate of growth of capital available for investment is greater than it would be with a smaller or a larger rate of population increase. At a smaller rate, insufficient capital would be generated; and at a larger rate, a disproportionate amount of capital would have to be set aside for non-productive investment. It is revealing that it is difficult to think of a society in which an unacceptably low rate of capital formation can be definitely ascribed to an unduly low rate of population growth, but most undeveloped societies are examples of the situation in which an unacceptably large amount of capital has to be diverted to non-productive investment; hence the growing force of the argument that, up to a certain point, it is much more sensible to invest a given amount of capital in preventing a birth than in generating productive enterprise. (There is a good simple account of the two notions of optima in G. Ohlin, Population control and economic development. Paris: 1967: OECD. The value of investing in birth control is assessed by W. C. Robinson and D. E. Horlacher in "Population growth and economic welfare," Studies in family planning, number 6, February 1971.) It would appear from the information gathered by the family expenditure survey that households of average income spend about 2.5 per cent of that income on every extra child, households of below average income slightly more, and households of above average income slightly less. In families of an average size, approximately 10 per cent of household income is saved, so that an extra child eats into savings to a significant degree. A reduction of average family size from 2.4 or so to about 2.1 would increase savings in the economy by about 1.5 or 2 per cent, if it can be assumed that families so affected would save the money. Thus, to reduce the rate of growth in Britain would reduce the need for the extra investment required to cope with an expanding population, that investment which is unproductive, that investment which goes into various parts of the non-productive infrastructure; and correspondingly increase the amount available for productive investment, the amount that can be considered to lead to increasing per capita income. It would also marginally increase the amount of saving, thus augmenting the other tendency. However, would not the overall cost of a lower or even, eventually, a zero rate of growth be that national output declined, so that we stayed in the same place or even, perhaps, produced less? That is, does population growth positively affect capital formation?

The answer is uncertain. Certainly, the higher the rate of growth, the higher the proportion of younger people in the population and thus the higher the proportion of young workers. Moreover, the higher the proportion of young workers, the higher the proportion of what might be described as flexible labour, that which is not committed in various ways to old crafts and practices and places of residence, and which is thus at least potentially available for redeployment in an economy in which the balance between sectors and parts of sectors is constantly changing. An older working force, which would result from lower fertility, is less flexible. Further, if there is anything at all in the argument that one of the main factors in economic growth is the supply of fresh labour, a lower fertility rate can affect economic growth only adversely.

It is certainly not the case that any significant proportion of potential labour remains to migrate from the country to the towns and the cities, which was the traditional source. Again, and this is even less certain, it may be the case that the prospect of a rising population is a necessary stimulus to investors, not only because it inspires a general confidence in the future but also, and more particularly, because the prospect of demographic expansion makes it much more rational to invest in goods for which the demand is increasing. There is the real possibility of a vicious circle here. It might be argued that with the same rate of capital formation a smaller population or a population growing more slowly would produce a greater income per head, and, provided that savings did not increase disproportionately, a correspondingly greater demand per head, which would in turn generate more capital. Of course, if the investors do not see it that way, if, that is to say, they feel that a slowly growing or stationary population would mean a lower demand, the advantage of a slower or zero rate of expansion would be eliminated.

These arguments aside, it would be fair of such investors to point out that if fertility did fall, then the ratio of active to dependent people would eventually change for the worse, and, moreover, that a constantly increasing demand for benefits, such as extended education and earlier retirement, would cut the proportion of active people even further. There is a projected increase in the proportion of young people remaining economically inactive after the age of 16 between now and the end of the century; and, although it is hoped that such a tendency will increase output in the long run, with a more educated work force, there can be no guarantee of this. Graduate unemployment is already with us, and it does seem on present showing that a strictly economic case for more further and higher education would not look very strong. (The Conservative Party is already aware of this, and it doubtless influences their educational policy.) Nevertheless, with regard to the dependency ratio, not all is on the side of those who remain content with present rates of demographic expansion. Two arguments lead in the opposite direction. First, with a lower fertility rate many married women would have more time to spare from raising their children. Two thirds of them are at present inactive in the strictly economic sense, and some of the rest could be brought in to reinforce the improving dependency ratio. Furthermore, if the climate of aspirations (of which the women's liberation movements are at once cause and consequence) persists, there is every expectation that more women will wish to work. Second, if we did lower fertility the dependency ratio would, in the short term, for a generation, be even more favourable than it looks at present. If that breathing space could be used with foresight and imagination to build up an investment for the older population that would eventually ensue, the most serious effects of the worsening of the age structure, when it arrived, could be alleviated.

More realistic is the point that, with a lower fertility, the pressure on schools will be relieved, and recent calculations (that present rates of educational investment are not even adequate to keep up with the demand, let alone to improve facilities) are a frightening warning of what will happen with even a more or less constant proportion, although increasing numbers, of young people. With respect to the economic aspects of the age structure, there is the final point that the age pyramid will have a narrower base. That is to say, what one may call the "demographic structure of opportunity" will shift in favour of the old and away from the young. There will be the same number of places at the top of every organisation and a larger proportion of old people to fill them. In a society that is already very gerontocratic this is not perhaps such a frightening prospect as it is to the Americans, some of whom have placed very grave emphasis on the demographic stifling of potential mobility that would follow a decline in fertility. Against this, however, it seems to be the case (and one sees no counter-trend) that young people have less and less respect for authority; if, in addition, there is a greater proportion of old people in positions of authority there could be political fireworks.

Demographic engineering to produce a more radical politics is perhaps an attractive prospect, provided that this radicalism does not take a vicious turn such that the condition of the greater proportion of old people in the population actually deteriorates. Nevertheless, this same engineering could also generate a more conservative conservatism.

Finally, there is the rather vexed question of the relationship between population growth and foreign trade. A simple view is that the more people, the more imports, and the more imports the more exports, and thus a greater dependence on external trade. This leads to a call for less people, or for a rate of demographic expansion at or below the feasible rate of expansion in the production of exportable goods.

The assumption behind this is that it is a good thing to be completely self sufficient; which is, more or less, false. Had Britain always been self sufficient we should still be a peasant society with a moderate amount of manufacture and internal trade. A good part of our economic development has been due to an advantage in world trade, and there is no reason to believe that a continuation of this external trading would be to our disadvantage: indeed, there is every reason to believe that it is absolutely essential. The only question is how best can we manage it. Nor is there any argument to suggest that the kinds of demographic growth likely to be experienced in Britain, say from zero to 1.0 per cent a year, will affect this management in any way. Therefore, there seems no case for believing that any demographic policy will have to take into account any impact upon foreign trade.

What, then, can be concluded from a brief review of the relationship between population dynamics and economic growth in Britain? My view is—very little. We cannot usefully employ the notion of an optimum population because it assumes constant technology and capital. It may be of use in analysing the situation of populations, human and non-human, living in an unchanging environment, but it is of no use for the analysis of an advanced industrial society.

We cannot even produce a result by applying the notion of an optimum rate of population growth, since what we need to know is what would follow from a different rate of growth, all other factors being equal, and we cannot know that. Most crucially, to use the notion of an optimum rate of growth, there has to be agreement on what ends to maximise.

I have assumed, in concert with the standard discussions of optima, that we wish to maximise economic growth. Even then, I have not shown, and I do not believe that I would be able to show, that demographic variability of the kind we are likely to encounter, even if we did have a population policy, would definitely affect growth one way or the other. The arguments go in both directions, and each is contingent upon a multitude of other factors which are either imponderable or beyond my scope (and the treasury's control). Of course, there is no consensus about the desirability of economic growth.

There is, I believe, a greater consensus about avoiding economic decline, but one wonders even here whether it is unanimous. To show that it is, it would have to be demonstrated that there are no people who would willingly trade a certain proportion of their income for other utilities. No-one has shown this, and it would not be easy to try to do so; although one suspects there would be some, particularly in low and middle income brackets, where they cannot expect to earn enough to buy their way out of the dis-utilities, who would willingly trade a certain proportion of their income, relatively low as it is, for certain other benefits, especially if they saw fewer more prosperous people above them. This suspicion reveals the impossibility of arriving at a satisfactory conclusion to the question of "what optimum?". There are different optima for different people, and it is not feasible to take all these and produce an optimum of the optima, since the valued utilities are not commensurable and cannot therefore be mathematically manipulated. The problem is directly analogous to the intractable difficulty of calculating the maximum welfare of a population: it is, in fact, part of it.

It can be argued that if this is so, then any attempt at a cost benefit analysis of the consequences of population growth becomes similarly impossible. For the assumption of such analyses is that there is an optimal solution, in which costs are minimised and benefits maximised. In a simple one person two value situation such a calculation may be feasible, but in a population of 56 million, with an effectively infinite set of values, it is not, and it is on such a scale that a cost benefit analysis of possible rates of population growth in the United Kingdom must be made. This creates great difficulties for any rational case for a wide ranging social policy, whether it is about taxes, or education, or population, for, if it is true that a complete calculation cannot be made, then any rationale will break down at a point far short of completeness and arbitrary decisions will appear in its place. The objections are not merely technical, however.

incommensurable utilities

Utilitarianism is a method by which different values may be set against each other and optimised. It has no sense in a society where such differences do not exist, and is quite helpless in a society in which they do, since different values are incommensurable. The way around this, of course, is to reduce all values to an economic price, but this vitiates the very purpose of the exercise, since it tacitly imposes the common value that the greatest good is the maximisation of income. It therefore coarsens the society whose quality one is trying to improve.

(Two particularly misleading examples of cost benefit analysis, published in 1972, are relevant here; first, that produced by the Birth Control Campaign [A birth control plan for Britain], and second, that produced by PEP [The costs and benefits of family planning]. Neither takes into account the positive contribution made by the child when it becomes a productive adult, and both take simple economic indeces of cost. Clearly, on their assumptions, every single birth is virtually an economic catastrophe.)

This digression should not be taken to imply that rational debate has no place in the advocacy of a policy. That would be absurd. What it does imply is that all that can be done is to trace the likely consequences of particular events or limited sets of events and then evaluate them in a piecemeal fashion. The opportunity will never be closed to others to trace different consequences and impose diferent evaluations, for there is and cannot be a correct answer. In short, there is no point in talking about either one optimum population or one optimum rate of population growth. Not only are the economic arguments in the balance, but the very premises upon which those economic arguments rest are open to a nonempirical challenge, and the situation with regard to non-economic costs and benefits merely illustrates this more graphically still. Nevertheless, having entered this caution, the fact remains that there does not seem to be an insuperable objection to a lower rate of population growth, even a zero rate, on economic grounds, given the present majority view on what the economy should be doing. If, therefore, a reduction in population growth could be shown to produce fairly unequivocal benefits elsewhere, the economists would not have a very firm plank upon which to rest any objection to it.

use of resources

It is claimed by the Zero Population Growth lobby in the United States and by the Conservation Society in Britain that a reduced rate of growth (and indeed a reduced population size) would take the pressure off the use of non-renewable resources, alleviate pollution and ease congestion in all its forms. (Three characteristic arguments are P. R. and A. Ehrlich, Population resources, environment. San Francisco: 1970: Freeman. J. Parsons, Population versus liberty. London: 1971: Pemberton Books. The Conservation Society, A population policy for Britain. Walton on Thames: 1972: Conservation Society.) These three benefits are undoubtedly the most lauded among those who urge some demographic restraint, and thus deserve careful scrutiny.

There are, essentially, three views about the present use of so called "nonrenewable" resources or raw materials. First, "it is not true that the natural resources available to us are fixed" (let alone diminishing). Although it is evident that there is coal in Wales and not in Suffolk, and in that sense that the resource is fixed, its availability, which is the crucial matter, is contingent upon the availability of a technology to exploit it. Moreover, since we cannot know what technologies will be invented in the future to exploit materials that we either cannot reach at present or whose very existence is still problematic; and since undoubtedly there are still very many materials waiting to be discovered; we have no cause for worry. This argument neglects two important factors. Even in the short term, it neglects the cost of getting out materials. Already, the National Coal Board leaves many seams unmined simply because it would not be economic to exploit them. It may be countered that if we need the material badly enough then we shall be willing to pay for it, but it may be the case that we are forced into a situation in which the cost of, say, fuel, relative to other goods, is alarmingly high, yet in which we are forced to pay it because we must have energy of some kind. However, in the long term, this argument neglects the fact that if the materials are simply extracted, used and then finished with, we are eventually going to run out of them. This may not be for several generations, perhaps even a score of generations (and for that reason no-one may care very much); however, it may come much sooner, especially if the new technology does not emerge or if (as is the case with atomic energy) an early promise disguises severe technical and economic problèms.

Second, "we are simply running out of vital materials." The Ehrlichs have made the following calculations, on the assumption that world population remains constant, that consumption will not increase above 1965 rates, that no material now uneconomical to mine will be exploited, and that there will be no discovery of hitherto unknown reserves. (Population, resources, environment. San Francisco: Freeman.)

Then lead would run out in about 1983, platinum in 1984, uranium in about 1990, crude oil in 2000, tungsten in 2030, aluminium in 2150, iron (in deposits containing more than 20 per cent ore) in 2375, coal in 2800, and so forth. As they say, this is pretty alarming, and although some of these are substitutable, not all are, and those that may be, would have to be replaced by much more expensive substitutes. Moreover, the first two assumptions are conservative. Nevertheless, the simple inference that the Ehrlichs draw from these estimates, namely that we are heading for sheer, straightforward scarcity and consequent disaster, can be challenged.

The challenge rests upon the point that these resources are not non-renewable, that no material (with the exception of those used for generating energy, which are converted) is irretrievably lost. Consider aluminium beer cans. These replaced steel cans, which replaced returnable bottles. They did so because it was cheaper to use aluminium than steel; and it is still cheaper, at present, to use fresh, raw bauxite rather than to re-use the old cans. However, the aluminium in the used cans does not disappear; it is still there, year after year becoming more inaccessible, but not disappearing. It is simply that it is more expensive to recover this once used material than to use new ore. By about 2000, this situation may be reversed, and the old cans may be re-used or, in the ecologists' language, re-cycled. The problem of energy is, however, more acute, and although it is a subject somewhat beyond my competence, I see no cause for satisfaction. Conventional sources of energy are going to run out some time even if we are more economical in our use of them (by, for instance, using the waste from atomic reactors to warm prawn farms instead of doing it by fresh oil or electricity). Moreover, the prospects for atomic power seem thin on two counts, that it is expensive and that it constitutes a serious health hazard and thus a high social cost to the community. The problems associated with fission are, however, somewhat less serious, although the use of the least exhaustible source of energy, the sun, is at present little more than a technological fantasy.

The first of these two views of the prospects for the supply and use of natural resources, the view that does not envisage any practical limits to the supply, does not see population as a problem, since it does not see any problem. The second view, which, in its extreme version, sees resources running out relatively soon, sees population as a very severe problem indeed. This is because it accepts the first and the third but not the second of the three premises which together allow one to derive the most sensible argument. The first premise is that the natural resources do not exist in unlimited amounts. The second is that the constant demand for higher productivity, which necessitates the introduction of new technologies and the shortest path to the highest profit, leads to a disregard for the medium term prospects for resource supply and even for the short term externalities that rising productivity entails. The third premise is that with a finite supply of resources and a given economic organisation, more people mean more problems. 33 million beer drinkers are worse than 27 million; if we allow ourselves to expand until the year 2000 in the manner present projections imply, we shall be that much worse off. A third view, which seems the most sensible, accepts all three premises.

If one accepts all three, as surely one must, the crucial question is that of the relative contribution of economic organisation and population growth to the total problem. Unfortunately, this is a difficult question to answer. It is certainly true that the total quantity of raw materials used by British industry over the past two decades has increased at a faster rate than the population (although the use of certain materials, such as iron ore, manganese ore, copper, zinc, lead, tin and magnesium has actually fallen) and this overall increase suggests changes in the economy that are, at least partly, due to changes in the total size of the population. Perhaps this is not the most important issue, however. What is important is the question of whether, first, the economic system can adapt to a greater re-use of once used raw materials and, second, whether this adaptation would be easier with a more slowly growing population than with the present one. Since adaptation policies partly turn upon the question of whether industry will be willing to pay the necessary price, one returns once more to the question of which rate of demographic expansion is likely to make the payment of this price least difficult, that is to say, to the question of whether demographic growth and economic growth are closely linked at the rates of increase under consideration.

The economic fortunes of the country are not closely linked, in this respect, to its demographic ones; whatever the problem about resources, it is not mainly demographic, but political. For even if, with a lower rate of population growth, we were able to generate more free capital, that capital could still be used to raise the standard of living and thus maintain or increase the use of natural resources. To divert it to increasing the rate of recycling, and to increasing the generation of energy from new sources, is an important political objective, but not one that bears upon population policy. All one can say is that a growing population will probably not help such a transformation, but it may not hinder it either.

pollution

Substantially the same argument applies to pollution. At any given rate of pollution per head, more heads mean more pollution. That is obvious. However, it is not the same as saying that more heads cause disproportionately more pollution, which appears to be the gist of many popular polemics. As has been shown very clearly for the United States (Barry Commoner, The closing circle. London: 1971: Cape) not only has population growth not contributed disproportionately to the increase in pollution but neither has a rising standard of living. What is responsible, to a very large extent, are changes in the components of that standard of living; the substitution of nonreturnable cans for returnable bottles, of plastics for biologically degradable packaging, of detergents for soaps, and so forth. It therefore follows that if we were to reduce the rate of population growth,

and if such a reduction were not even to increase prosperity, pollution would still continue to increase so long as industry channelled investment into the more profitable highly polluting products, for whose externalities or social costs they remained unresponsible. Thus, it is more a question of the politics of economic organisation, than of population growth.

Again, economic questions are vitally important; revealing faults that throw into question the whole set of assumptions that lead both capitalists and socialists to place such a premium upon the growth of material production, which is to say short term profitability. It is not clear, however, that a population policy would have much effect by itself on the adverse effects of such a momentum. Certainly, it might help alleviate matters at the margin, but even if zero population growth were (as it were) to appear tomorrow, the rate of pollution would continue to escalate if everything else remained as it was. It is for this reason that the more simple minded arguments for population control are dangerous, for they divert attention away from the case against the intrinsic irresponsibility of economic systems that place such a reckless emphasis upon short term growth. The question that has to be answered (and which even the Japanese are now asking) is whether or not it is anything short of insane to allow private industry to pursue greater profitability for investment in greater profitability, while the state pays a larger and larger bill for the external costs of such a course. This is not, however, a question that bears directly upon a population policy.

congestion

Pollution is not, then, a purely economic question, although some people think it is. Even less purely economic is the question of congestion. Much has been made of the experiments by Calhoun and others upon rats, in which beyond a certain population density, ordinary social organisation broke down and rape, homosexuality, infanticide and all the rest broke out; there, it has been said, lies the future of man. This is implausible. First,

in several respects real densities have been falling; the number of people per room is dropping decade by decade, and there is a progressive thinning out of urban centres. Second, even such a committed protagonist as Paul Ehrlich has admitted (in private conversation) that not one study has shown a causal connection between sheer crowding and social or psychological breakdown in human beings. Whether it be in the centre of old cities, on board ship or in concentration camps, the observed pathology can always be ascribed to other causes. No doubt crowding exacerbates matters at the margin, but, to my knowledge, not even this has been proved. Nevertheless, the one environmental factor that man cannot alter, as he can all the others, is space.

Much needs to be said before concluding, in a simple minded way, that more people means less space for each person in a society such as this. To begin with, not everyone has equal access to what space there is. Those in the country have more than those in towns, and the rich have more than the poor. Much could be gained by a greater redistribution away from urban areas for those who wish it (and not into high density new towns in the middle of the country) and a greater restriction on the ability of the more wealthy to buy space. Present projections of the distribution of the population to the end of the century give hardly any indication of a "natural" (or unplanned) redistribution away from the most densely settled areas. By 2001, the Midlands and South will probably contain about 60 per cent of the population (excluding Northern Ireland) and the North, Wales and Scotland the remaining 40 per cent. The present proportions are 58 per cent and 42 per cent. Urban development of all kinds covered 11.6 per cent of the total area of England and Wales in the late 'sixties; by 2001, it is estimated that it will cover 15.2 per cent; an increase half as big again as the increase in population.

This projected "natural" development assumes a continuing heavy immigration into the Midlands and the South (and heaviest of all into East Anglia, whose population is considered likely to double by 2001) and a corresponding emigration from other areas (although some of these, like the North, will still experience a net increase). Thus, if some of this migration were to be halted, and if some emigration were to be encouraged from the south eastern quadrant of the country, the redistribution would be more favourable.

Nevertheless, it might still be argued that the demand for rural or suburban dwellings is rising at a rate incompatible with its satisfaction, and that this is a case for urging a policy of population restraint as well as redistribution. Such a demand is not easy to prove, however. At present urban house prices are rising faster than rural ones, which suggests the reverse, although there is some evidence to suggest that more people would prefer a rural or semi-urban dwelling if they could, for instance, maintain their job and their standard of living. Under existing housing policies, many working class people have a hard enough job facing reality as it is, without any consideration of ideal alternatives. Again, the evidence does not seem to present an overwhelming case for the regulation of population, although it is clear that in societies like Britain and the Us, against say France, the culture places a greater premium on rural or semi-urban residence, and a slower rate of population growth may make this more realisable.

Access to space, on the other hand, is a more immediate issue, and it is significant that two of the Conservation Society's strongest planks are the pressure of population upon travel and recreational areas. If we assume, with the Department of the Environment, that the ownership saturation level of 0.53 vehicles per head will be reached by the mid 'nineties, it follows that there will be 32 million vehicles on the road by the turn of the century, an increase of more than 100 per cent. Even without any population increase at all, the estimate would be for 29 millions. Traffic is rising even more quickly; vehicles are being used more. The average vehicle use rose by 100 per cent between 1958 and 1968, and is estimated to rise by another 200 per cent by 1980. If this estimate is correct, the road traffic problem to the end of the century will be six or

seven times as bad as it is now. If there are no more vehicles, it could be four or five times as bad, and perhaps more. The number of person visits to open spaces and other places of leisure will rise accordingly. In a century of exponentials, this is clearly the most ridiculous of them all. Since the costs of coping with extra vehicles increase themselves at a faster rate than the addition of each extra vehicle (now that the machinery of regulation has to be so complex) the state is committed to paying more and more for more and more people to find it more and more difficult to get anywhere by road.

It seems easy to suggest at least some restraint upon population growth as a brake on this vicious circle, and some restraint would clearly have advantages, but it would in no sense solve the problem. The road system is going to seize up within the next generation whatever happens demographically, and the motor industry it said to realise this (probably more clearly than does the government). It is a social problem that is exacerbated by population growth, but one that is largely independent of it. Nevertheless, it can still be argued that, even in the period that follows the mass use of the private motor car, which cannot be far away, more people will mean more pressure upon space for leisure and recreation, and that this constitutes something of a case for population control. Even although it does, it should not be seen as a simple panacea. Much could be done now to make more space available by taking it out of private hands, and indeed it might be argued that as the demand for space grows and the resources of the various conservationist bodies increase accordingly (because people believe that they will put pressure on owners to make space available) so population pressure will provide the mechanism by which more space gradually becomes available.

To some degree it creates its own solution; but this can only be a short or at best a medium term advantage, for space is not infinite, and even with more of it managed in the public interest instead of for private pleasure and profit, there will inevitably be less of it per head.

Aside from the problem of "unwanted" and "accidental" conceptions, this probably constitutes the strongest case for population regulation. Once again, however, the problems in this area are not primarily demographic. At most, population size and growth exacerbate them, but their proper solution lies in policies of a quite different kind; regulating traffic by some means other than the ordinary price mechanism (for example, by offering reductions in public transport fares for those who do not have cars), requisitioning land in areas that have recreational possibilities, of whatever kind (the cost of this could easily be made up by modest entrance charges for national parks if there were no other feasible alternative), offering local authorities the choice of paying more of the cost of increased private traffic or receiving financial help with the implementation of public vehicle hire schemes and the expansion of public transport, and so forth. The present Department of the Environment policy of merely trying to contain, rather than alter, existing trends, is doomed to eventual failure and will thus entail a vast waste of resources in the short and medium

imponderable conclusion

It is impossible to calculate not merely the optimum population but also the optimum rate of population growth for this country. Even if the values to be optimised could be agreed upon, they would still be incommensurable, and even if they were not, the calculations would be impractically complex. A decision cannot therefore cloak itself in such apparent objectivity, for that would be spurious. It has to be political.

Two points may be made about this. First, the debate so far on the implications of population growth, both here and in the third world, has been curiously non-political; and where it has not, where for example, the people of the developing countries themselves have hinted at "genocide," the protagonists have been dismissed as "irrational." It seems to have been taken for granted that the conse-

quences of population growth are ones upon which all reasonable men will agree, and that it is therefore merely a question of a "scientific" demonstration of what they are, and of the most effective "technical" solution. This is mistaken. The third world is only over populated in the context of its relations with the rest of the international community; and the effects of demographic growth for the world as a whole, set out in the MIT/Club of Rome computer simulations, are only remotely plausible on the assumption that political and economic relations both within and between states remain exactly as they are at present. Second, therefore, it is necessary to point out the character of the politics of the debate about population in this country. They are, very simply, conservative. The assumptions (in their most naïve, but not least typical form) are that the political economies do not change, that conditions of living and recreation remain the same and that traditional middle class freedoms must be preserved.

Accordingly, since certain "qualities of life" are felt to be threatened, some other culprit must be found. Hence the attention to population growth. This is doubly mistaken. First, population control by itself would change very little, unless one is talking of unrealistic rates of decline; and second, it draws attention away from the simple point that to make industry more responsible for its actions and to improve the environment are political issues that raise once more the old, but by no means irrelevant questions, of the fundamental priorities of social and economic policy. of socialism versus capitalism, of limiting a few freedoms in the interest of many more. The debate has raised some important questions, but has pointed away from the best ways of dealing with them,

Nevertheless, it can hardly be argued that much more population growth is actually an advantage, and to this extent it is worth considering what might be involved in engineering the very slight fall in the rate of growth which, on balance, might be desirable. Such engineering happens to coincide anyway with what a socialist party should be demanding, regardless of the demographic situation.

4. political difficulties

There are three features of engineering such a fall which make action at first sight unlikely. First, there is no immediate political pay off from any conceivable policy; demographic policy, at least with respect to fertility, takes at least a generation to make itself felt. Second, if the policy entails intrinsic political difficulties, it will be even less attractive. Third, the experience of population policies in other countries is not encouraging. It is probably true to say that with the possible exception of Roumania's decision to make abortion more difficult to obtain, and the recent efforts of the Peoples' Republic of China, no such policy has had a significant demographic effect, and none at all seems to have had a long term impact; but these arguments are not decisive.

First, and most important, it is in fact a political advantage that any policy will have no discernible effect for a generation; for, although there is no need for immediate drastic action, there will nevertheless come a time when, one way or another, zero growth will have to be achieved. The longer the period during which nothing is done, the greater the problems for the future. Thus, to act now would avoid the severe demographic effects of an abrupt change in marriage or fertility patterns and thus ensure a more gradual transformation to a more stationary population; and by acting now, a party would probably achieve a good deal of support. The most extreme advocates of population control would, it is true, be only partly mollified, but the larger number of people with a less hysterical anxiety would be mollified too, and the policy would be weak enough to ensure that those who saw no problem did not feel bound to object to it. Moreover, it so happens that the best policies to this end are policies to which the majority of the Labour movement, and even some Conservatives, are already committed for quite different reasons.

Second, much is made in the arguments about population control in the under developed countries, of the feasibility of introducing financial incentives for people to want, and thus to have, fewer children, and, indeed, in all the recent debates in

the United States, about how a lower or even zero rate of growth is to be achieved, such methods are by far the most widely canvassed. Their justification rests upon the argument that people must be motivated to want fewer children. This argument does not apply to Britain, at least at the present. The present possibility is that the desired family size here will drop to a level that is, in overall demographic terms, not very much different than that required for replacement. This is fortunate, since fiscal disincentives to higher fertility, or at least all those that have been proposed, are in direct contradiction to socialist philosophies on what family policy should be. In essence, they not only penalise the parents of larger families (who are disproportionately concentrated in the poorer groups), but in so doing they penalise the children too. Even eccentric proposals, such as that in which the disincentive should operate on the parents later in life, by withholding their pensions, do not escape this difficulty. (The best way to reduce desired family size is probably to increase household real income, and thus the possibility of alternative satisfactions. For all but the most prosperous families, there appears to be a negative correlation between income and fertility.) The only political difficulty entailed in the most sensible policy for this country (which is basically that of improving existing services) is the political opposition met by all socialist proposals; namely, that not so much should be handed out to the poor and needy, and that nothing should be handed out to those who can afford to help themselves.

The third argument is that if no policy for reducing fertility has ever had any effect, what hope is there that we shall be any more successful here? On closer inspection, however, this objection is not so strong as it might appear. No industrial society has yet implemented a policy for reducing fertility. Such policies are so far peculiar to non-industrial societies, and their experience cannot be taken as a fair indication of what might happen here. If it could, however, it would not be encouraging. It is not unfair, although somewhat over simplified, to say that where programmes of population control

through the limitation of fertility in these countries have been successful, their success (with the exception perhaps of the Peoples' Republic of China) rests upon a coincidence between the inception of the programme and the start of a tendency for couples in the country to want fewer children anyway. Industrial countries, on the other hand, whose deliberate population policies have been so unsuccessful, have characteristically been concerned to raise their fertility. France is the most famous instance, where there is fairly direct evidence that the policy there has had little effect on couples' behaviour.

Many more countries, including Britain, have what might be described as a tacit pro-natalist policy, although even here there is little evidence to suggest that things like family allowances, implemented primarily for other reasons, have had a positive effect on births. (Alvin Schorr has produced an interesting comparison between two countries similar in many respects except the provision of family allowances; in Poverty: Spring, 1967.) None have tried, or even considered trying, to reduce fertility, and there is therefore no experience upon which to base an estimation of what might happen if any country did. This is not to say that one should be optimistic; merely that there exists no good empirical reason for not trying.

Of these three arguments, the first thus remains as the most forceful. Not to put too fine a point on it, if the Labour Party wants to secure the majority of the working class vote, it need not worry about the medium and long term future at all. (This is because the time orientation of the working class, and of much of the middle class too, of course, is very short.)

However, no one would argue that such considerations should entirely determine the party's policy; on the contrary, some action must be taken for future generations who have yet to express their political will. To this extent, effective social policy in a democratic country must be undemocratic. It is the classic dilemma of truly effective socialism, committed to trying to construct a better society.

The right can gloat over our dilemma, of course; Powell's views on black and brown immigrants reflect the mood of his constituents, in this sense he is more strictly democratic than any Labour politician who talks about race. The sad fact about being so purely democratic, however, is that it can lead to reactionary policies; for it neglects, if it does not regard as actually wrong, the fact that a party has also to educate those it exists to represent. In this respect, the Labour Party may take heart from the plausible doctrine that what happens in nominally democratic politics is at least as much a function of the complexion of the parties as of the people they nominally represent. That is to say, since the ideological traffic is two way anyway, why not take advantage of it? In implementing a social policy, the party can therefore explain exactly why it is doing so and not be accused of flouting the existing conventions of democratic politics. So long as present or future generations have the opportunity to reject what is being implemented in their name, little political harm and much social good can come of such a strategy.

5. the means for a population policy

Il this may be so much pious rhetoric, , in fact, we do not have the means to mplement a population policy. Several ssume that we do not (see David Eversey, "The special case; managing human opulation growth;" in L. R. Taylor (ed.), 'he optimum population of Britain, pp 03-116); but since we have not tried, how an we be so sure? In fact, I am myself essimistic. Not only do we know little bout what effects people's fertility beaviour, their marriage patterns, their ntended family size, their intended pacing of children and their contraeptive practice, but what we do know aggests that only the most drastic hanges of fortune can have a certain fect. However, that is true in many areas f social behaviour, and if non-revoluonary governments acted only upon cerinties they would seldom take any action.

Ve can try to do one or both of two rings. We can try to postpone growth, y delaying marriage and increasing the itervals at which married couples have neir children; or we can try to reduce it, y discouraging people from marriage nd encouraging or enabling them to have naller families. The first is more diffiult, although perhaps now less important ian the second. More people are marryig at younger ages (the trend is dampenig somewhat now), but more couples are aving their children at longer intervals ian did their immediate predecessors in ie early and mid-'sixties and are thus ompleting their families somewhat later. he second, however, is not wholly withut drawbacks, for more people are larrying overall (although it is not clear at much slack remains to be taken up this respect). This leaves the encourageent of smaller families and the provion of more effective means by which eople may avoid accidental or unwanted regnancies. From what is happening emographically now, it is not clear hether we really need to encourage eople to have smaller families, and cerinly not clear that the need to do so can e said to override the countervailing ght of couples to have as many or as w as they wish. We certainly do not ant to encourage larger families, but ren if we did we do not really know how.

The question is, therefore, can we achieve what we would like to simply by improving the means and access to the means of controlling births? If the aim is immediate zero growth, then the answer is no; but, because of what such a state of affairs would lead to in other respects, it is not desirable anyway. If the aim is the reduction of family size to eventual replacement levels, such that the next generation would merely replace the existing one, couple for couple, and that subsequent generations would eventually reach a situation in which they replaced themselves, generation for generation, the answer is also no, unless desired family sizes also drop. However, if the ambition is merely some reduction in fertility, but not necessary to replacement level, then the answer is definitely yes. For this reason, and because they happen to fit with socialist philosophy for quite different reasons, such policies are the most feasible; they will appeal to the greatest majority in the population, and they need not rely entirely upon arguments for a population policy for their justification.

contraception

There is little government can do to improve the means of fertility control, beyond making larger contributions to those international agencies through which much of the financial support for research is being channelled. This research is promising, but not immediately so. Present regulations governing the introduction of new drugs require a long testing period, and allowing for the relative slowness of the adoption of new methods, and the possibility that couples considering adopting or even having already adopted them will be sensitive, as they have been in the case of the pill, to periodic publicised doubts about their possible side effects, it is clear that more effective contraceptives for widespread use are some way away. Much more crucial is the task of getting people to use the more effective methods that do exist.

The majority of English couples use either withdrawal, which is technically inefficient, or the sheath. The former is

the time honoured method used by preindustrial and early industrial populations, and with sufficient motivation it can be very effective; but it demands considerable emotional and physical sacrifice if it is to be so, and if such sacrifice can be avoided, so much the better. The sheath is also by now a traditional method, but is more effective. It does, however, cost money, and it is unpleasant to use. Nevertheless, the present concentration on female methods of contraception, and especially the pill and intrauterine devices (IUDs), is somewhat unrealistic in view of the strong existing commitment to sheaths, reflecting, at least in part (as does withdrawal), the view that birth control is more the man's responsibility than the woman's. Britain has, as yet, no sufficiently accurate picture of the history of couples' contraceptive practice, but what we do know tends to suggest that if one path of transition is from the cap to the pill another is from withdrawal to the sheath. It is therefore rational in the short term to encourage more people to use the sheath, always hoping that, for their own sakes, they will eventually move to the cap, pill or IUD.

Two kinds of encouragement are possible. The first would be for the public health authorities to buy up stocks from the manufacturers and make them available at a much cheaper price, or, ideally, free. Contrary to popular belief, the sheath is not more widely used by manual workers (but they use withdrawal more, suggesting that they might move to sheaths), by the less educated, or by older couples; but to infer from this that it would be rational to make cheap sheaths a means tested benefit would of course be more degrading and embarrassing than means tests usually are. In the interests both of their sexual satisfaction and of their birth control, it does not seem too high handed to suggest that couples should be encouraged to use sheaths more and withdrawal less.

The second kind of encouragement would be to make sheaths more easily, which means in part more widely, available. There is no good reason against, indeed there are good reasons for, continuing to let them be available through traditional

outlets like barbers, sex shops and NAAFIS, but they should also be available in doctors' waiting rooms, hospitals, clinics, supermarkets, workplaces, public lavatories, schools and colleges and so forth, as well as, at present, by post. At present, even the FPA and local authority clinics (whether run on an agency basis with the FPA or entirely by the authority) tend to play down the sheath, partly because of the convention that female methods are better, and partly because the clinics tend to see the women and not the husbands. (This, and many other points below on the present state of family planning services in England and Wales, are taken from Ann Cartwright, Parents and family planning services. London: 1970: Routledge and Kegan Paul.) In this they ignore the pre-dispositions of many couples and doubtless contribute to a certain amount of "unplanned" fertility, in that if a woman does not continue with a newly. introduced female method she and her husband may well fall back on withdrawal. The FPA are aware of this, and husbands clearly have to be approached from elsewhere. School, for the young, work, and above all perhaps television, seem the most sensible alternatives. In short, as Ann Cartwright quite correctly concludes, the present professional deemphasis on the sheath is rather irrational.

This is not to say that the female methods have to be ignored; but because the three most significant ones, the cap, the pill and the IUD, all require medically supervised introduction and monitoring, making them more widely available is less straight forward. There are four not unrelated difficulties. The first is that none of the three methods is seen to be without draw. backs. Women consider the cap to be the least reliable of the three and the most, unpleasant to use. They see IUDs as more reliable, but as having various disadvantages, including a certain danger to health and a propensity to come out, as well as having to be checked every so often. They see pills as far and away the most reliable but also as far and away the most dan gerous. The first attitude is perhaps the least open to objection. The cap is prob ably marginally less reliable than the IUI (especially if its unpleasantness leads to

certain amount of risk taking), and one obviously accepts their view that it is unpleasant. IUDs are both reliable and safe, in conditions where there is a good follow up service, as a recent large scale experiment in the Exeter area has shown. It is now agreed that pills with a relatively neavy oestregen content may contribute to thromboembolism in later life, and there has accordingly been a shift to pills with a lower level of this hormone, although these may be more unpleasant in a less serious way, in allowing more oreakthrough bleeding. It has been argued that the risks from the pill for younger but not for older) women are lower than he risks from pregnancy. (See Richard Doll, "Investigation of relation between use of oral contraceptives and thromboembolic disease," British Medical Journal, 1969.) Barring the discovery of some nitherto unsuspected side effect, it seems that the uncertainty and consequent fear aroused by the pill will gradually subside and thus more women will move on to it.

The second difficulty in making female contraceptives more widely available, lies n womens' diffidence before the medical services. They are probably more afraid of midwives than of health visitors, and nore afraid of doctors than they are of nidwives. Unfortunately, it is doctors who can do more with regard to contraception, simply because they see patients more often over a longer period. However, only about half Britain's general practitioners GPs) bring up the subject as a matter of course in any post-natal consultations, and ilmost all GPs discuss only the merits and lemerits of the pill. Many womens' attiudes are such that they are diffident ibout bringing the matter up; those that lo probably being those who would be all right anyway.

The third difficulty, implied in the second, s the relatively poor performance of GPs n this respect. The reasons that they give or not doing more are not, on the whole, espectable (apart from that difficult ninority who themselves have strong thical objections to the whole business). ronically, Ann Cartwright found that alhough 72 per cent of the doctors in her ample thought that the GP was the best

person to discuss birth control, only about half thought that GPs should actively raise family planning with their female patients. The central difficulty is that doctors are no better trained than anyone else to cope with issues of marital relationships and sexual problems, which inevitably arise in such discussions. This explains why younger ones are marginally better than older ones, and why women doctors of all ages are rather better than men; but neither this, nor any other factor, justifies the fact that almost half the doctors who prescribe the pill do so without examining the patient.

The fourth difficulty is that others in the health services, midwives and health visitors in particular, do not do as much as they could. This is partly because they are not inclined to, but partly too because they have no training whatsoever and may simply not know very much about it. Moreover, the contact between doctors, midwives and health visitors is poor, and the rôle that the latter could play in monitoring the use of and experience with contraceptives that the doctor has prescribed is thereby vitiated.

How may these difficulties be circumvented? In the first case, the solution lies not only in improving ways of letting people know about various contraceptives, but also in doing so in such a way as to avoid the often considerable embarrassment that surrounds even a personal confrontation with a doctor on this subject. At present, women can in general either read the very inaccessible literature (quite impractical for 99 per cent of them), or talk it over with a usually very middle class (and thus often off putting) professional like a doctor or a clinic worker, or pick up information from friends, or read about it in popular newspapers and magazines. Most, in fact, do one or both of the last two, and find these the most useful of them all. There is some suggestion that the pill has broken taboos about the discussion of such intimate matters, but it would be foolish to pretend that it has dissolved them completely. Not much can perhaps be done for couples who find it difficult to talk about it between themselves, and as various pieces of research

have shown, these are by no means a small minority; but something could be done to provide information in media such as television and womens' magazines, which people can see or read without any embarrassment from another person. The political parties could take an initiative in the first instance, by replacing the bombast and self congratulation of party political broadcasts by some actual information on how to achieve what everyone regards as a basic right, namely the right to have as many children, or as few, as one wishes. In the second case, one can but appeal to all those magazines which now laud the joys of regular orgasm, but remain prudishly quiet about what happens to the semen afterwards. It is unrealistic to maintain that because the female methods require medical supervision only doctors can discuss them.

The second difficulty is more intractable still, but one might suppose that if the whole question became a normal matter of public discussion in schools, in the media and so forth, and if it were made perfectly clear that access to contraceptives is a right exactly equivalent to the right to a rent rebate or a tube of sedatives, then more women would be more bold in bringing the matter up with more doctors and others in the health service. A notice in waiting rooms, on clinic cards, and so on, telling women simply that they are expected to discuss these matters with doctors might help, and more could also be done by providing for an automatic referral system to another doctor if one's own is unable or unwilling to talk about it. If the medical men who wrote letters to the British Medical Journal and The Lancet in the first week of January 1972 are serious in their view that the provision of family planning services must be intmediately widened, and that "we should be in the vanguard of a campaign of population education," then they should persuade the British Medical Association (BMA) to sponsor radio, television and newspaper advertisements and press for local doctors and health visitors to have time to go to schools and take a class with the teachers on sex and contraception and how to avail oneself of the second (if not the first). That way too, doctors and health visitors would gain a first hand impression of the fear and ignorance that surrounds the topic, and thus a better idea of the actual problems that face them if they intend to do something serious about it. To stand on professional dignity, and merely appeal in the columns of the specialist journals and the quality newspapers to abstract bodies to implement a population policy, is not only to confuse the question of a population policy with that of family planning, but also exactly to miss the point of the problem, for which they in part must take both blame and responsibility.

Part of that responsibility lies in including something on birth control in clinical education. One or two teaching hospitals are already doing this, and the results are encouraging. The students seem very interested, and the demand for time on it exceeds that available in a choked curriculum. Something could be done too in pre-clinical education in the universities.

The Todd report recommended some "behavioural science" in medical educa-tion, and this is, of course, something with ramifications well beyond the sphere of birth control services; but these services, for their effective management, do require an exceptional awareness of nonmedical issues and could greatly benefit from such instruction. Hitherto, many medical schools have completely ignored Todd, and in at least one, and thus perhaps in more, the opposition is not merely based upon the tired plea that one would include everything if there was time, but rather upon the view that such education is intrinsically inappropriate. Lastly, a circular from the BMA to doctors arguing that it is the latters' duty to raise the subject of birth control and to do everything. to ensure that a patient and her husband are in the maximum control of their fertility, would be most encouraging.

In a complex industrial society with a myriad of specialist services, it is commonplace to state that the problems of getting the services to the people who want and need them can be solved by greater "integration." Thus with birth control, where it is held that much could

be achieved (in the context of this discussion, that the fourth difficulty could be alleviated) by integrating the services responsible for this. The Birth Control Campaign, which has the support of several prominent Labour politicians, calls for the integration of the birth control services on their own. Others call for the integration of the birth control services with other health services, such as those for post-natal care and child health. The Secretary of State for Health and Social Security has announced that the birth control services will be transferred to the new health authorities to be set up on the re-organisation of the health service in 1974. His statement on the 12 December, 1972 makes this clearer. The health services will take direct responsibility for providing free birth control advice and contraceptive supplies for the year after a birth or abortion; they will also take a larger, although still unspecified, part in providing clinic facilities; but they will be dependent upon local authority social service departments for the referral of those in "special social need" of free supplies. Nevertheless, it is not intended that any of the existing services, public or private, should be stopped.

How, then, might a greater "integration" of these various services be achieved? A proper answer to this cannot be given here, for it raises too many detailed questions about other parts of the health service to allow of an answer that is both brief and precise. The central issue, however, is: should the birth control services be integrated apart from the others, or with some of them? The advantages of the first lie in the fact that it would come to be seen less as a medical service than as a general social one, and this might lift some of the professional mystique and popular superstition that surrounds the matter; and, also, in the fact that someone other than the local FPA or local authority clinic would be definitely responsible for birth control. It is not easy to see how the integration would be achieved, however. To begin with, although the experience of separate clinics is not, of course, wholly disappointing, to remain properly available they must be open all the time. This is difficult in more remote areas, and would be difficult too in some local authority areas where the costs might prove prohibitive (as always these would be the areas where the services were most needed). Second, domiciliary services would have to be run by specialists, who would be in short supply, unless money were abundant, whereas health visitors and midwives already exist and could be encouraged to help with this; for it is crucial to ensure that contraceptives are being used properly and that couples are not suffering in any way by their use. For these two reasons, the pilot experiments being conducted for the Secretary of State by the FPA in Coalville and Runcorn from April 1972 to April 1973 are not likely to provide very realistic information; one suspects that they are a delaying tactic. Third, doctors are becoming increasingly important as a source of advice and service, and unless specialist doctors were seconded to this job (and they would be more thinly spread and thus more difficult to get to see for most people), it would seem more sensible to keep the subject of birth control with the GP, who knows the couple's medical history and who probably uses one consultant at the local hospital for all obstetrical and gynaecological problems. The broad and continuing personal contact is, without doubt, worth preserving.

A second commonplace in discussions of how to get the bits of a complex society to work more effectively together is to say that there should be greater "rationalisation," and this I wish to disavow immediately for this problem. This is because it implies a concentration of services in one sector, and the experience of those who have looked at the whole gamut of services is that as many approaches to (and kinds of) birth control as possible should be allowed for. GPS, health visitors, maternity hospitals, obstetrics and gynaecology departments, child welfare clinics and social workers should all be prepared to discuss all methods, even if they have for medical reasons (or in the case of abortion, for legal ones) to refer the couple to their doctor. For each of these bodies to know what they are doing, however, each must have full access to a documented history of the couple's fertility and birth control, which would have to be compiled by the doctor in consultation with the couple. Such histories would achieve much of the desirable "integration," for they would tell each person in the services what the couple had experienced, accepted and rejected, and thus provide a more rational basis for new advice. Provided, of course, that the utmost discretion were used, such records would also provide an invaluable source for research, with a view to altering the services to suit changing wants and needs. Lastly, and this is of the greatest importance, all birth control services and associated devices, chemicals and so forth, should be provided absolutely free. In a civilised society, in which there is a nominal adherence to the view that the self determination of fertility is a couple's right, it is quite outrageous that people should have to pay to exercise it. As with other social benefits, means exist for clawing back money from those who can afford it; these are infinitely more desirable than yet another set of obscure, degrading, costly tests and associated forms.

abortion and sterilisation

There is evidence of a growing demand for both abortion and sterilisation, and with it, an increase in the prevalence of the view that both should be available on demand. All societies, even those with apparently liberal abortion policies, have placed or do place some restriction on the availability of abortion, but many are more liberal than we in this respect. There is no general medical reason for preferring not to abort if the abortion is done within the first three months, for the mortality rate in that case is lower than the maternal mortality rate and about equivalent to the risk of mortality for one year on the pill; and the experience of societies, such as Japan and those in eastern Europe which have had or still do have liberal policies, has been that more abortions are performed in the early months and correspondingly that costs per abortion are lower. To the objection that there may be women for whom an abortion would be "psychologically damaging," there are two counter-objections.

First, the methods now used to diagnose such potential damage are not reliable, psychological and psychiatric science are far too inexact for that. Second, it has not been shown, and one wonders whether it is true, that a woman who is considered psychologically unfit to have an abortion is likely to be more fit to have a child and be a mother. In short, there is no good reason why abortions should not be available on demand, subject to women being advised of the medical risks if there are any, and thus no good reason why anyone for any reason should seek to prevent a woman having one, unless they have ethical objections, in which case it is their responsibility to transfer the patient to someone who has not. It would thus be humanitarian, quite apart from any demographic effect that might ensue, to guarantee by an amendment to the abortion act that a woman may request an abortion for any reason whatsoever, and to stipulate that no one has the right for any reason whatsoever to prevent her having one, subject to the proviso that she is properly informed about any possible medical risks. The present situation, in which the majority of abortions are probably performed for social reasons disguised as ones of health, but in which a woman cannot be sure that she is not going to meet non-medical opposition from a medical assessor, violates the most elementary rules of social justice.

The issue with sterilisation is less clear cut. In those cases in which the man or the woman is likely to come back after some time regretting the operation and inquiring about the possibility of a reversal, doctors are placed in a difficult situation. One cannot deny that some people may not know their own future self interest. No legislation can get around this difficulty, and therefore this is not a matter that can be directly improved by political intervention. A small pilot experiment might be fruitful along the lines of what has been tried with respect to the demand for abortions in the German Democratic Republic and Hungary, which is to have non-medical representatives available to discuss and advise the person making the request, although one would have to be very careful not to make the

situation into a kind of trial, as has happened in eastern Europe (with the result that, in the case of abortions, doctors there avoid the formal machinery altogether). In any event, it is a difficult situation, compounded by the growing demand, especially for male sterilisation. It is certainly not clear that doctors can be expected, or should be allowed, to take the decision entirely by themselves.

Such are the possibilities for improving the practice of birth control in Britain now. None needs to be justified in terms of any population policy whatsoever. All can be justified by the traditional argument that, as in a civilised society privileges become transformed into rights, so it is the duty of the community to ensure that people have the best possible means of exercising those rights. The coincidence is fortunate, since it ensures a wide base from which to draw support for action. What is less fortunate is that so little has been done already. Only 91 of the 169 local authorities in England, Scotland and Wales who had, before 1 January, 1972, made an application to the FPA under the latter's agency scheme whereby it offers various packages for authorities to implement the 1967 Family Planning Act, had made an application which meets the intentions of that act. Forty were making their own arrangements (and only six have announced an intention to offer free services); while 23 had done nothing. Regional inequities in this respect, as in respect of the FPA clinics themselves, are therefore great, and intolerable.

The Conservative government's proposed introduction of free advice and supplies for a year after each birth or abortion, and for those in "special social need," together with their expressed intention to make birth control more widely available through more clinics, clearly go some way towards realising these aims. Three objections come immediately to mind. First, these proposals leave not only the provision of supplies but also the provision of advice in the hands of the medical services: there seems little justification for the latter. Second, although it is commendable that some people, other than those who have just had a baby or an

abortion, should be able to receive free supplies, there is the somewhat sinister implication, corroborated by Sir Keith Joseph's "cycle of deprivation" speech in June 1972, that large families are a cause of poverty and its associated deprivations.

This is a vexed issue, but it seems reasonably clear that although a large family may exacerbate such deprivations their causes (and the causes of the large families themselves) lie more in the structural situation of such people in society. Accordingly, the more that is done to temper the exacerbating factors the less likely is it that attention will be paid to the real problem, which is that of removing the quite intolerable amount of poverty that still exists in Britain today. Third, and most generally, his proposals make Sir Keith Joseph's opinion that there is as yet no case for the provision of a completely free service even odder. Indeed, such provision is most necessary in that period after couples have finished having the number of children they want, in that long period of active sexuality and fecundity in which the majority of accidental or unwanted pregnancies occur. The difference in cost, between £12 million for these proposals and about £50 million for a completely free service, would not seem to be a forbidding one in the context of levels of public expenditure on other things. There is still much for a Labour government to do.

One final possibility, which also coincides with traditional socialist philosophy, is to try to alter not merely the practice of birth control within marriage but also, by affecting the proportion of women who work, the average age at marriage for women and the number of children that they want. In fact, there is not much evidence, for any but very highly educated women, to suggest that the opportunity to work before marriage delays the date of the marriage, but there is a consistent association in non-agricultural societies between working wives and lower fertility,

This is perhaps most evident from a comparison between eastern and western Europe. In the East, family sizes are characteristically lower than they are in

the West, and although there are other contributory factors (whose contribution has not, however, been decisively compared with that of female employment) there can be little reasonable doubt that some of the difference may be explained by the higher proportion of working women in the East. In the Soviet Union, the German Democratic Republic and Czechoslovakia, between two thirds and three quarters of married women of working age were working in the mid 'sixties, and, although the proportions in the other eastern countries were slightly lower than these, none was as low as the British figure, of slightly less than one third.

However, the difference between the fertility of women who work and women who do not, or who do not work very much, is declining in both places. Whereas British women who married in the 'fifties and had worked for more than half of their married lives said recently that they expected to have 1.6 children in all, those who had worked proportionately as long, but only married in the 'sixties, said that they expected 2.2. On the other hand, women married in the 'fifties, who had worked for less than half their married lives, expected to have 3.5, and those who had worked for a comparable period, but had married in the 'sixties, expected only 2.5. After 1967, indeed, Hungarian women who were working were actually indicating a higher fertility than those who were not. At present, however, there is no good reason to supose that this reversal, as distinct from the narrowing of the differential, is a permanent trend.

Studies in Britain and in other industrial countries (including eastern European ones) suggest that there are three aspects to the problem. First, many couples do not see it as appropriate that women should work after marriage. This is more evident in societies in which urbanisation is long established and in which therefore the memory of the norm of female rural employment is weak, like Britain, than in those where the opposite is the case, such as those in eastern Europe. Second, even if the wife and her husband wish her to work, there is frequently an absence of suitable work, or at least of employers who

are willing to employ women. Third, even if there is suitable work and an adequate opportunity to obtain it, wives are often unable to find adequate provision for the care of their children. Jerzy Berent suggests (*Population studies*, volume 24, 1970) that one of the reasons for the striking difference between the fertility of working and non-working women in eastern Europe in the 'fifties and early 'sixties was that the policy of providing crêches and nurseries had not been very successful, with the result that reconciling a job and a moderately sized family was difficult. Since it can be argued that at least some of the increasing productivity in Britain since the war is the result of more women working (many of them part time), the government and industry should have an interest in making such work more available for its own economic reasons. What might be done?

First, it would be instructive if one of the standard surveys, such as the General Household Survey, inserted a question designed to elicit the demand for female employment, so that one had a better idea of which kinds of women (in terms of age, duration of marriage, education and number of children) wanted it, and where such women were concentrated geographically. Our most recent information on this appears to date from 1965.

Second, the Department of Trade and Industry and the Department of Employment might consider a policy whereby employers could be granted financial concessions of various kinds if they agreed to make provision for female employment on more flexible lines than is usual for male employees. It is worth noting that firms are willing to do this in areas in which married female labour is all that is open to them and from which they do not, for whatever reason, wish to move.

Third, maternity grants and related provisions might be improved. In Sweden and West Germany a working woman is entitled to her full wage for a period before and after the confinement, in Sweden for 60 days in all, and in West Germany (despite a considerable labour shortage) for 84. Moreover, it is illegal in Sweden

to dismiss a single woman for getting married or to dismiss a married woman for getting pregnant. Swedish commentators are of the opinion that these provisions do serve to maintain a high female activity rate and restrict fertility (half the women consider 2.0 as the *ideal* family).

Fourth, the provision of and access to industrial re-training schemes should be as freely available to women as they are to men, and not, as at present, restricted to those traditionally female occupations ike teaching in which there is a shortage. Associated with this is the more intractable business of getting men to realise that Britain is some way behind some other industrial countries not only in its employment of married women but also n the range of occupations open to them.

Fifth, there should be less emphasis in girls' secondary education on domestic science and more on facilities for entering those occupations hitherto not part of that very small subset, like hairdressing, air nostessing and nursing, which really are extensions of personal or domestic service.

It might be a good idea to encourage nore day release the other way round, with girls spending days in their last year it school going round offices and factories and so on to see what various kinds of work were like, and even trying to get hem hired for a few weeks so that they an get the feel of earning money, working, and so on, to come back for a term or two to disscuss their futures in the light of such experience.

lixth, it is to be hoped that local authorties will rapidly be able to implement the to overnment's authorisation noney to bring up the proportions of hildren in nursery schools. It is intersting that the Secretary of State for Education's proposals, that 90 per cent of hildren of 4 and 50 per cent of children f 3 should be provided with free nursery chool places by 1982, are based upon the ndications of demand revealed by the lowden committee, for if those indicaions are correct, it implies that the denand for activity outside the home by nothers of small children is larger than present employment figures would suggest. Finally, it would be no bad thing if there were to be a minister responsible for coordinating social and economic policies as they affect women in general, and married women in particular. This would be far less than the womens' liberation groups demand, but it might well speed up the implementation of more obvious measures.

In all these ways, therefore, the government could do something to provide wider opportunities for mothers to take up work outside the home, opportunities which, quite apart from their intrinsic desirability, might well serve to reduce the number of children that couples want to have. It is time that we began to think of a society in which it was not an unspoken assumption that the natural course of action for a woman was to marry early and spend the majority of her life at home caring for her husband and children.

SUMMARY AND CONCLUSION

- 1. At present many pressure groups are asking for population control in Britain. In this, we are similar to the United States, but dissimilar to other industrial countries. However, all such countries will have to achieve zero growth, in the sense of ensuring that fluctuations sum to zero over a long period, at some point in the next century or two.
- 2. The only official action at present being taken on a population policy, as distinct from family planning and birth control, is that a panel attached to the cabinet office is reviewing the problems raised by the present size and rate of growth of the population.
- 3. Official population projections envisage an increase from 55.7 million in 1971 to 63.1 million in 2001 and 66.3 million in 2011. Variations in mortality and migration being comparatively insignificant, the crucial assumptions in these projections are that average family size is expected to stabilise at 2.3 and that, as a result, not only of the wave of births in the late

'fifties and early 'sixties, but also of the steady increase in the absolute number of births in all years, there will be more couples having, on average, this number of children in the future. The annual rate of growth will therefore increase, if these assumptions are correct, from about 0.3 per cent per year to about 0.5 per cent.

- 4. An increase in the age at marriage would slow down the rate of growth, although not necessarily reduce family size. What would do so, to a level close to, if not coincident with, the level necessary to ensure bare replacement of the parent generation, would be the elimination of a proportion of unwanted or accidental births.
- 5. A reduction in fertility would shift the age structure to an older average age. In the short term it would improve the dependency ratio, but in the medium term it would not.
- 6. The economic arguments for and against a slower rate of population growth seem finely balanced. There can thus be no decisive economic objection to the kinds of demographic change that seem feasible in the next 30 or 40 years.
- 7. A larger population consumes more resources, and although few of these are non-renewable, the costs of re-use are high. Nevertheless, population control will not solve this problem if the remaining population continues to live at a higher standard of living governed by conventional economic assumptions. To that extent, the depletion of resources is not a demographic problem and thus almost wholly irrelevant as an argument for a population policy.
- 8. A larger population leads to more pollution, because it contains more polluters; but again, even if the population were controlled, pollution would continue if existing assumptions about the responsibility of manufacturing industry for the external costs of their activities are maintained, and if standards of living also continued to rise. To that extent, pollution is not a demographic problem and thus not an argument for a population policy.

- 9. A larger population leads to more congestion, because there are more people in a finite space. However, even if zero growth were achieved tomorrow, road traffic, the most serious instance of congestion, would continue to increase, unless standards and policies changed. A population policy would alleviate congestion, but only in the short term. Eventually, and barring an unrealistically small population, road traffic must be controlled.
- 10. In these respects, as in others, a concentration on the contribution of population growth draws attention away from the real issues, which are ones of the distribution of material resources within the population and of the freedom of some to create unfreedoms for others.
- 11. To eliminate much unwanted fertility requires considerable improvement in birth control services. This is not only practical, but desirable for quite separate reasons, so that couples may have the opportunity to exercise their right to have as many or as few children as they wish.
- 12. Some rise in the age at marriage and some reduction in desired family size might be achieved by the extension of opportunities for women outside the home and by the provision of ancillary services; this is desirable for reasons independent of those justifying a population policy.

In short, there is no pressing need for a population policy. What are necessary are greater efforts to provide an effective range of birth control services and more attention to extending opportunities for women, and if these serve to reduce the rate of population growth, so much the better. The population debate does raise wider issues, but these in turn imply considerations that are quite independent of population policy. Accordingly, the present climate, fostered by the Family Planning Association in its Countdown campaign and by the conservationist groups, is irrational and immoral; irrational in its hysteria about population growth, and immoral in its implication that the basic right to determine one's own fertility must fall before the new and undefended crime of having more than two.

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