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Some Twentieth Century Problems in Relation to Marriage and Childbirth.*

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LIFE for all of us contains three chief adventures, very great adventures, and yet most absolutely common. Our morning newspaper presents us with a daily record of them, and yet none of us are much aroused by *Births*, *Marriages* and *Deaths* unless they occur in our very close environment.

It is with these three adventures that I wish to deal, so common and yet so all-important. As obstetricians and gynæcologists we come more intimately in contact with *Birth* and *Marriage* (and incidentally with *Death*) than almost any other section of the community. Most intimately do we come in contact with the fountain-head of life and with those issues on which the future life and vigour of the race so greatly depend.

How do we stand and what assistance do we give individually and collectively in dealing with these great problems?

Our first duty may be supposed to be the safe-launching of a newcomer on the troubled sea of his or her career. True: but there is an earlier duty still. It is coming to be more and more fully recognized that the months before birth are of the greatest possible importance to the infant. Therefore our first obstetric care is what is now called "*intra-uterine puericulture*," involving the endeavour by judicious care of the mother during pregnancy to secure the best possible prenatal influences, and a resultant child whose advent will be an advantage to the race and not an encumbrance or a danger to it. Not only must pre-natal influences be reckoned with to this desired end, but even ante-nuptial care must be considered:—Of that, however, later. Given proper pre-natal care, we have a diminution in prematurity, an increase of weight in the infant, a diminished infantile mortality during the first ten days after birth (according to Bordée only 0.94 per cent.). Further, rest before confinement, good food, healthy surroundings, and avoidance of

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excitement seem to give the mother greater vitality, more perfect nutrition, full-term labours and good recoveries. It should be possible to secure all these advantages for every mother of every class: meanwhile that seems to be only a dream of the future, though experience has proved from the data obtained in pre-maternity Homes that the above results can be secured for the mothers of illegitimate children: how much more then should these advantages be obtainable for all married women.

Moreover, the supervision of the pregnant woman enables difficulties, dangers, and complications to be foreseen and in many cases prevented. When we come to the actual birth itself, the management thereof by competent attendants secures the best possible results for both mother and child, for the science and art of obstetrics has now advanced beyond the empirical, and with the exception of that dread scourge, eclampsia (though even it can be dealt with by preventive measures), there is no obstetrical complication which cannot be successfully met, if it is only recognized in time, and intelligently managed. The mother's life and health are of course the primary care of the obstetrician, and though it may seem a paradox it may occasionally happen that the sacrifice of a child in labour may actually result in a saving of child-life, as the resulting healthy mother is a potential asset for the production of more children or for the successful bringing up of those already born.

The declining Birth-rate, and its amelioration fall to be considered under the heading of marriage. Here it will be convenient to consider the question of the *Endowment of Motherhood*.

As I said before, it should be possible to secure a good prospect of successful labour and of health for the child among all the poorer classes. Already something has been done towards this by the State in regulating the hours of women's work, paying for medical aid during confinement under certain conditions, forbidding industrial labour for four weeks after confinement and securing early notification of births. The institution of health visitors by private effort has been of great value in the preservation of infant life.

The National Insurance Act has recently provided a small maternity benefit for all women legitimately or illegitimately pregnant whose incomes, or whose husbands' incomes are less than £160 a year. This you will observe includes practically all the labouring classes, and it will be convenient to consider shortly how that will affect the women themselves and those who will attend them; how this new arrangement is likely in its present form to modify or interfere with existing methods of teaching, and to forecast its effects on the well-being of those who will follow us.

The measure enacts that the woman is to have free choice of Doctor or Midwife to attend her and that she is to receive a grant of

30/- as a maternity benefit. Suppose she has to pay the doctor £1, and a midwife say 10/-, she will naturally choose the less expensive attendant, so as to have as much money over as possible for other purposes. Doctors will therefore mostly go to the wall, and midwives will become the more favoured attendant. If that is so, the dispensaries will cease to have any midwifery department, yet there will be no corresponding benefit to *the labouring woman* in a city like Edinburgh if you substitute an uninspected midwife for the supervised and senior dispensary student.

In non-teaching centres the maternity endowment may be a benefit to the community so long, but only so long, as well-trained and supervised midwives are available, but as we shall see immediately it is doubtful if the supply can be kept up, for the field of practical teaching is likely to suffer grievous curtailment.

The passing of the obstetric department of dispensaries cannot but be regarded as serious, especially in Edinburgh, where it has been the means of turning out as fine a set of obstetricians as have ever issued from any school—cautious, self-reliant, and with a practical experience which has made them a valuable factor in every quarter of the globe. This experience has in no sense been gained *at the expense* of the dispensary patients who have by no means been exploited or have suffered injury thereby. On the contrary, they have received such attention and interest as many private patients might envy. On the least suspicion of any abnormality or danger, assistance is promptly requested often to the amusement if not occasionally to the annoyance of the long-suffering “chief,” who in the small hours of the morning may be apt to consider his pupil over-anxious. Let us beware, however, of quenching youthful enthusiasm: long may it flourish!

If the dispensaries are likely to suffer from the Insurance Act, how will its provisions affect the Maternity Hospitals? So far as one can gather from the Memorandum submitted to the Commissioners of the National Insurance Act by the General Medical Council, the Maternity Benefit is likely to do harm unless (1) the Commissioners can see their way to allowing the recipient of the benefit to retain part of it for her own use, if she goes into hospital for her confinement, and (2) unless they will agree to allow attendance by a senior student, under the direction of the Medical Officer in charge, to be reckoned as attendance by a medical practitioner and to be equal in value to attendance by a midwife. (The same principles would also apply to Dispensary departments.)

If that cannot be done, then undoubtedly women will only avail themselves of the hospital when they are desperately ill, and there will be no adequate experience possible for the practical training of either students or nurses—*normal cases being absolutely necessary for that training*. Thus in the hasty desire to afford the people all

possible comfort and assistance without sufficient consideration or discussion of ways and means, present efforts seem likely to make it impossible that future generations should be adequately cared for at all, and they may well arise and blame us. In taking thought for those of our own time we must do nothing to prejudice the interests of those who come after us. As Whetham says:—"The great danger of democracy is, that more even than in other forms of Government, it may consider reforms too exclusively from the point of view of the immediate comfort (or supposed comfort) of the individual, and may ignore their slow but irrevocable effect on the inborn character of future generations. All the more necessary is it that those who venture to assume the heavy responsibility of attempting to legislate for a democracy should understand the fundamental problems of race, on which the future welfare of the nation depends."

Hitherto it has been abundantly proved that women of the working class are benefited, even in normal cases, by going to a maternity hospital to be confined, still more so when complications exist. Now it is very easy to frighten women away from maternity or any kind of hospitals. They are told strange and terrifying tales by their ignorant neighbours of a high death-rate and other supposed dangers of the hospital. True, the death-rate is sometimes high, but not among normal labours, nor in abnormal cases which have come in early enough. The death-rate in maternity hospitals is extraordinarily low considering the type of many of the cases sent in. Now so far as one can judge the new Act in its present form will tend to increase the proportion of abnormal cases sent in, by diminishing the entry of normal cases. The hospital death-rate will in consequence become higher still, and popular opinion—that capricious jade—and never so capricious as when uneducated, will become correspondingly antagonistic to our great life-saving institutions.

Let us also bear in mind what I have already said that normal cases are the essential backbone of practical obstetric teaching.

The difficulties I have enumerated seem to me a probable if not an inevitable result of the new Act, as it now stands. Time alone can show what advantages may accrue from it: there seems to be a good deal of room for doubt as to the obstetric aspect of the question. Provision is certainly already made that if in the opinion of the local authority, the sanitary conditions of any house or tenement are unsatisfactory the woman may be ordered into hospital for her confinement; but in how many cases will this be done? But few, I think.

It may be said—I have heard it said—that it is very hard on a poor woman that she must become material for teaching because she cannot afford to pay a fee, and must go into hospital. That sounds

very plausible, put thus, but it is forgotten that a teaching hospital is in itself a guarantee that the very best skill, and the most considerate attention are given in return for the experience obtained. There are no severer critics than pupil nurses or students, and it seems scarcely necessary to elaborate to those who know a hospital, any answer to such a criticism when we have only to say to those who speak of hardship:—Come and see for yourselves. It is only ignorance that can excuse such criticism. The second great function of a hospital, after securing the very best possible care for mother and child is to afford the practical teaching of the art of midwifery. The interests of the patients are primary, not only for themselves but for their unborn children, and these interests in no way suffer (as we know) if we combine their own personal advantage with their value as teaching material: it is clear that these two aspects are not antagonistic. That being so, we must now consider our duty to succeeding generations. If, as we have seen, the Insurance Act is likely to do away with or diminish dispensary teaching, then it becomes of paramount importance to see that maternity hospitals are not also interfered with. Their continuation is justified both on the ground of the present good of patients, and still more if possible by the needs of the generations to come. We cannot teach nurses, midwives or students without popular maternity hospitals, well-filled with normal cases. How is this to be secured?

To make a hospital popular it must be abundantly proved to the women chiefly concerned that it is to their interest to go into hospital: they cannot be coerced into it. It seems to me that the question is now mainly one of pounds, shillings, and pence, since the Insurance Act has become law. If the woman sees it to be worth her while financially to go into hospital she will go. In a sense the hospital will be competing with the doctor and the midwife for each patient. Had the competition been with the doctor alone this would have been, to say the least of it, rather invidious, but the midwife falls also to be considered, and she, on account of her probable cheapness, will be chosen before either doctor or hospital. It would therefore not be a system of underselling the doctor if some arrangement can be come to with the hospital and the Insurance Commissioners, such as follows:—that say 10/- be paid to the hospital for each patient (the same fee as the midwife), and that on her leaving the hospital at the end of twelve or fourteen days, she receives the balance of £1, either directly or through some recognized society. It may be said:—Why not let the patient have the whole 30/- when she leaves the hospital, and let her have all her hospital attendance free? There are two objections to this:—first, that it might savour of bribery and corruption on the part of the hospital, and secondly, it must not be forgotten that charitable subscriptions to hospitals will be considerably diminished as the result

of the Act, and the hospital will stand in need of a *quid pro quo* to make up for this, which may possibly pave the way to national endowment.

It must also be borne in mind that during the time the mother is laid aside, some one must look after her house and possible other children, whether she is in hospital or stays at home. The midwife may in many cases do a certain amount of this domestic work in addition to her purely professional services if the patient remains at home, though she *might* exact a further payment for so doing. If the patient is in hospital, such payment will certainly be exacted by the temporary housekeeper if no daughter or other near relative is available. To sum up:—it is the duty of the medical profession alike in the interests of present-day mothers and children and of those of succeeding generations to encourage women of the working classes (especially the poorer members) to go to a maternity hospital for their confinement. By so doing we shall be encouraging motherhood by diminishing the risks incidental to child-bearing, and we shall diminish infantile mortality. We shall also thereby secure the adequate training of doctors, nurses and midwives for those who will follow us, and for whom we shall be surely held responsible.

But obstetrics will not suffer alone, if adequate arrangements are not made: all medical teaching will likewise be affected. Not only has obstetrics, after a long and hard struggle, gained the position it now occupies on a level with the sister branches of medicine and surgery, but its art, as ever, remains the backbone of general practice, as it is the backbone of the country. Surely then those who supply the means of continuing the race, and of continuing it as healthily as possible are worthy of honour and not of contempt! I would put good mothers first, and good obstetricians and nurses a close second in this roll of honour; fathers are sometimes only bad thirds! Having done my best to magnify (not, I hope, unduly) this part of our office, and to indicate how it seems well in our present circumstances to provide for its right continuance and effectual working, let us pass on to the second great adventure in life which concerns us, and come to *Marriage*.

Now to obtain marriage under its best conditions, individuals must be trained physically, mentally and morally to meet its duties and responsibilities, and learn to safeguard jealously all that is sacred and noble therein. It is with this question that eugenics is now occupying itself so much, and although it is still to a great extent in the speculative stage, it is helping us to direct more attention to the advancement of the interests of those who will succeed us, and is doing yeoman service in combatting the prevailing selfishness of the times by emphasising the fact that no man liveth unto himself, and no man dieth unto himself. Whetham and others indeed question whether with regard to the treatment of certain

ailments, we are justified in attempting too strenuously to prolong existence for those who may thereby be enabled to hand on an inheritance of disease. This of course opens up a delicate ethical question. But even though we are interfering by our modern treatment with Nature's method of elimination of bad stock, yet it is perfectly clear to my mind that it is our bounden duty to preserve life at all costs, and that every effort must be made to keep alive every child born into the world, however tainted its body or mind may be. What we aspire to is to have only children of good stock, and that is the justification of eugenics in these latter days. Major Leonard Darwin has said that heredity should be the guiding star of eugenics, and Sir Francis Galton defines the term eugenics as derivatively signifying "good in stock, hereditarily endowed with noble qualities." It was Galton himself who introduced the word eugenics "to express the science of improving stock, which is by no means confined to questions of judicious mating, but which specially in the case of man takes cognisance of all influences that tend, in however remote a degree to give to the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable, than they otherwise would have had." Or, in other words, eugenics "is the study of agencies under social control, that may improve or impair the racial qualities of future generations either physically or mentally." (Galton.)

Now the ideal conditions racially for marriage are:—

Good physical health.

Steady mental balance.

Pleasing exterior (beauty if possible)

and above and beyond all these:—

Beauty of character.

Society, however, cannot be organised on the principles of a stud-farm, though some extreme scientists would seem to adumbrate such a possibility! The root of the matter is to be found in the suitable training of individuals for their racial duty. This training for each individual child begins with the first breath it draws. The ideal conditions for its mental and bodily development are that it should have healthy, wise, and just parents, good sanitary surroundings, and plenty of fresh air, with as many brothers and sisters as are reasonably possible. With school life begins the great crux. Everyone will admit that under the present conception of education pre-existing custom has far too great a say in the matter, and that education can only truly be thus named when each individual is stimulated to the fullest possible production of the best he can offer, instead of being rigidly cut to pattern and forced into a square hole when he really is a round button.

Then comes adolescence with its dangers and temptations. To enable individuals to meet these with the least resultant danger to

themselves and to the community, frankness of instruction combined with delicacy of handling is the true solution of many difficulties, and the parents *ought* to be the best teachers. Failing them there should be some means provided whereby all men and women can obtain healthy information about themselves and their present and future duties without offence to right-minded delicacy of feeling. My firm belief is that if a woman goes to meet marriage with a clear idea of what is required of her mentally, morally, and physically, there is not much likelihood of shipwreck. I am not here to deal with men, but I must just add that until men approach the same question from a similar standpoint, there can be no real hope of race regeneration.

As Newsholme remarks, there should be definite teaching as to the privilege of parenthood. There are great possibilities in this matter for future educational work, and the moulding of public opinion. I would add that women have tremendous powers for good or evil in this respect—probably more so than men. And therefore special attention should be given to teaching them, and more especially the poorest girls in our cities and slums.

Ruskin never wrote truer words than those:—

“The object of true education is to make people not merely do the right things, but enjoy the right things.”

While on the subject of education there is one part of it on which I should like to touch before passing further, and that is the physical and mental overstrain of our present system of education on girls, which I am glad to see is being at last considered by the Board of Education. I am not so much concerned with what is taught (though that might be usefully criticised) as with the conditions under which the education is given. These difficulties have in my opinion arisen since the passing of the Education Act of 1870, with its provisions for uniformity and the hustling of children *en masse* through the various arbitrary standards which it has set up. I think there can be no doubt that this has had a bad effect on many of the women who have been educated under this system. No attention has been paid by the teachers to the physiological changes through which every girl has to pass at puberty. The result is that the pelvic organs, being the last to develop, are handicapped just at the most critical time, and the woman never reaches a normal condition in her adult life. This has strongly impressed itself upon me in my professional experience. In the evidence given on this subject last year before the consultative committee on Examinations in Secondary Schools, Mrs. Scharlieb (one of the witnesses) has spoken with no uncertain voice. She says examinations for girls were too frequent and too competitive. The removal between the ages of 14 or 15, and 18, of this constant preparation for examinations would

result in a much stronger race of women. "The results of the strain not only interrupted and damaged the school career of these girls, but also injured them afterwards, and they did not get on so well as young married women." Mrs. Scharlieb suggests that examinations should not be competitive; that there should be one qualifying leaving examination at the end of school life with possibly one other examination about the middle. This, I consider, is putting the matter very moderately.

As regards what is taught to girls I should just like to say that domestic duties should form a greater element in their education. I shall merely quote two extraordinary instructions that were passed recently on the same day by a School Board, which speak for themselves. The first forbade the parents to keep elder girls at home and away from school in attendance on their mothers for two or three weeks following childbirth (threatening defaulters with the heaviest penalties of the law). The second recommended the purchase of full-sized dolls and complete layettes, as part of the school equipment, *in order to accustom the elder scholars to the care and protection of infant life!!*

We are all I am sure convinced that re-organisation of many matters affecting the bulk of human beings will have not only to be dreamed of, or even partially carried into effect, but thoroughly and efficiently organised before any real amelioration even of environment can take place. The only way by which to achieve such reformations is to succeed in interesting individuals themselves in their own amelioration and that of their surroundings; to realise in fact Browning's conception:—

"A people is but the attempt of many
To rise to the completer life of one;
And those who live as models for the mass
Are singly of more value than they all."

The improvement of surrounding conditions is only one factor in the desired improvement, and the weight of its influence is, according to Whetham ("Hereditry and Society"), not considered to be hereditary, for though the offspring of those whose environment has been improved may be physically bettered thereby they do not necessarily inherit (except in exceptional cases) either the desire to remain in improved surroundings or to strive for still better ones.

The matter, consequently, is hardly so simple as the late Prof. D. J. Cunningham thought, when, in speaking of physical fitness, he said:—"To restore therefore the classes in which this inferiority exists to the mean standard of national physique, all that is required is to improve the conditions of living, and in one or two generations the ground that has been lost will be recovered."

In a recent review by Tredgold, the present position of matters

has been fairly put. He points out "that the fundamental cause of national success or failure, progress or decadence, survival or extinction, lies not in a nation's wealth, its culture, its trade, its government, laws, religion, or social institutions—for these are but a means to an end—but in the potentiality for development, in the vitality and state of health, in what may be termed the *Biological fitness* of the people themselves." The death-rate has sunk from 27.4 per 1,000 in 1861-65, to about 15 per 1,000 in 1911, not because the nation is more resistant to disease but because modern science and skill have done so much to combat disease and death.

"Still in spite of the diminished death-rate and of the lessened prevalence of some diseases the average rate of illness has been steadily increasing for the last two generations, as witness the returns of the leading friendly societies."

As already indicated the essential feature of modifications produced by *environment* is their *non-transmissibility*, while the essential characteristic of *germinal peculiarities* is their *transmissibility*. In the great majority of cases, as Tredgold points out, the adverse and inhibitory effect of environment would appear to be limited to the individual: an adverse environment exerts a transitory influence only, as soon as it is removed, the development of the germ-cell proceeds in a normal manner. Is the retrogression of the race in this country, he asks, due to germinal and transmissible conditions, or to faulty environment which is non-transmissible? It is probably mainly the former. "Recent social reforms, philanthropy, etc., have no doubt benefited the biologically fit, but they have still more benefited the biologically unfit. This is of course as it should be, but it brings with it difficulties for the future, as it enables the biologically unfit to continue to propagate degenerates, and by mating in some cases with healthy members of the community to drag fresh blood into the vortex of disease." One of the most pressing problems of the day is that of the care and control of the mentally defective. There are three bills before Parliament dealing with this question at the present time, and there is no doubt that the country is beginning to be fully alive to the importance of the question. "If the shoulders of the fit could be lightened of the ever-increasing burden of supporting the unfit, which now falls upon them, the fit would have larger families." It is to be hoped therefore that as a result of the bills in Parliament, and the recent first International Eugenical Congress, that more attention will be paid to Restrictive Eugenics, which would undoubtedly result, if not in an actual increase in births of the right sort, at least in an improvement in quality of the existing birth-rate.

"The object of Eugenics is the furtherance of the progress and happiness of the race by encouraging the breeding of the biologically fit, and discouraging or preventing the breeding of the biologically

unfit. The eugenist has no quarrel with those who seek to improve the environment of the community. This will always be a help, but no possible betterment of surroundings can serve to eradicate existing degeneracy which has been hereditarily acquired."

Eugenics has two aspects therefore—"Restrictive," or the prevention of the propagation of the unfit, and "Constructive," or the encouragement of the propagation of the fit.

This seems to offer some solution of the present serious factor in the condition of our nation, namely, the *diminishing birth-rate* among the successful classes in all ranks of life. Whetham says:—"The thrifty, skilled artisan, the prominent professional man, the landowner of good family have all halved their output of children in the last 40 years." In 1876 the average birth-rate in Great Britain was something like 36 per 1,000 of the population: from then it has steadily diminished, and in 1910 it had sunk to about 25 per 1,000. The average number of children to each fertile marriage before 1870 was 5·2, whereas it had sunk to 3·1 by 1890.

In a confidential census by Sidney Webb, taken among the class of intellectuals, the average number of children to each marriage was considerably under *two*. A special enquiry among thirty marriages recorded in "Who's Who" and the "Landed Gentry" among families known to be Roman Catholics, gave an average of 6·6 children to a marriage in the period from 1871 to 1890. The significance of this lies in the fact that the Roman Church is known to discountenance any artificial restriction in the number of children in a family. I would also point out that notwithstanding all the persecutions and troubles which it has been condemned to suffer for centuries, the little Jewish people has maintained itself and has increased simply because it has always considered marriage as a primary duty of mankind and because it has maintained and still maintains the family ideal.

We are forced therefore to recognize what no medical man of any experience has failed for many years to suspect, that the main decline in the birth-rate is due in great, and probably in increasing measure to voluntary causes. Sterile marriages and small families may of course always occur from unavoidable or so-called natural causes (or from carelessness during early married life). So far as can be gathered, however, there has been no great increase in sterile marriages during the last 40 years, whereas there has been quite an abnormal increase in the number of small families. All the available data therefore tend to confirm the lamentable fact that our diminished birth-rate is chiefly due to deliberate and voluntary arrangement on the part of individuals, too often alas! to gratify the desire for the pleasures of society and self-gratification at the expense of healthy and rational life. This is by no means a state of matters of recent development as some seem to think, but it is only

comparatively recently that artificial restriction has become so general in this country. Juvenal in 90 A.D. describes the women of the Roman aristocracy as being adepts in the arts of miscarrying and barrenness.

Dryden, in his translation of Juvenal, says:—

“ You seldom hear of the rich mantle spread
For the Babe born in the Great Lady’s bed.
Such is the pow’r of Herbs; such arts they use
To make them barren, or their fruit to lose.”

One can understand and sympathise with parents with small incomes trying to give the very best education they can afford to their children, and arguing that what they could manage for one or two, could not be achieved for a larger number. If it is really a question of *quality* before *quantity* there might be more to say for such an attitude, but I think the lessons to be learned from life are that within certain limits, quality is often determined by quantity in families, and that the best and most progressive all-round results as regards individuals, spring from nature’s arrangements, and not from those of art or design.

In 1798, Malthus, from an imperfect knowledge of economics, stated that population always tended to outrun its means of subsistence and could only be checked by famine, pestilence or war. While this was true to some extent as regards primitive or savage man, it is not true in our modern industrial period.

Henry George has said:—“ The increase of man involves increase of his food. Formerly in the United States there were only a few hundred thousand, now forty-five or more millions, but there is no difficulty in providing the food, which did not bring the men, but the men it. The substances which form man’s food have the power to reproduce themselves some billion-fold more than man himself has.”

Professor Abbott in his “ Social Life in Ancient Rome ” has recently given us some interesting comparisons between the modern American and the ancient Roman workman. The former receives about nine times the wage the Roman did, and the cost of the necessities of life is only about thrice as great.

There can be no question that the so-called wise regulation of the birth-rate advocated openly by so many apostles would, if generally adopted, lead, as Professor Flint has said, to the most shocking demoralization of all classes. Malthus would himself have disowned the neo-Malthusian league. I much fear that the good of the state or of society does not enter into the question at all in the present day. The whole system has in many cases its root and origin in pure and unadulterated selfishness, and in undenyng self-gratification (Strahan).

One cannot shut one's eyes to the fact that it is becoming increasingly common for women to discuss such matters as the possible prevention of conception, with each other and with doctors. Not many years ago few women would have cared to do so, but now even not a few newly-married women do not hesitate to proclaim their views, and while willing to enter upon marriage declare their determination to have no family. Selfishness and a morbid fear of pregnancy and labour are alas, too common in our midst, and it behoves us to see how far we are to blame in the matter, and what we can do to counteract these tendencies, which are undoubtedly increasing. These evils society has come by degrees to tolerate and even to look upon with favour, which would formerly have been scouted with abhorrence. Truly familiarity breeds contempt.

As Jules Simon has said of France (*where the deaths last year exceeded the births*):—"Our families are dwindling away, our country is dwindling with them, our race is doomed. But, to be sure we shall be able to afford a luxurious burial." And yet as Bertillon remarks, "France is rich enough to feed her children." We are told that Malthus was really the great precursor of modern pessimism, and that his fatalism knew no limits. It cannot be said that doctors are as a rule pessimists or fatalists, and it is therefore not extraordinary to observe the formation of a strong current of medical opposition to the outcome of Malthus' teachings, which I am glad to think is increasing, strongly protesting against methods whose principles if universally carried into effect would change matrimony into a monogamic form of prostitution, and would gradually lead to the weakening of social relations and the degradation of the moral sentiments (Francesco Nitti). One is also glad to see that some of the outstanding apostles of the Neo-Malthusian Crusade appear to have become dismayed at the effects produced by their own propaganda, and some of them even wished to withdraw what they had advocated.

There is yet another side to the adoption of the Neo-Malthusian doctrine which we should do well to consider, and that is the erroneous standpoint from which many men view the married state. They seem to consider it as a legal means of unlimited self-indulgence (again a monogamic form of prostitution), totally regardless of the wishes or feelings of their wives. In order to combat the restriction of families by the indiscriminate use of checks to conception, which we all so much deplore, continence before marriage and self-restraint after it, will need to be impressed on men from their youth upwards as the primary simple decencies of existence. This brings us to the question of how the character of a race can be modified by a selective birth-rate. We are bound to admit with Tredgold, that a hardy, efficient and energetic race will live and create surplus wealth in conditions where a less effective

population would starve. As Whetham says, a weak, ineffective and indolent people will make nothing of the most lavish natural resources. Unfortunately, the birth-rate is highest in these sections of the community which like the feeble-minded, and the insane are devoid of individual personality, or like many of the unemployed and casual labourers seem to be either without ideals, or without any method of expressing them. William Farr's words are as true to-day as when they were written in 1851:—"The idle who will not work, the unskilful who cannot work, and the criminal classes who cannot be trusted, are, whether numerous or few, always redundant." It is the quality of the population that is of importance.

What has been termed the Eugenic century on which we have now entered has got this problem to face in dealing with the personal factor on which the future of the race so greatly depends—the mighty force of parenthood and the conditions associated therewith. This is a matter intimately affecting us as obstetricians and will claim our profound attention ere long. There can be no question but that the State is vitally concerned in—nay, its very existence depends on the conditions under which infants are procreated, born, and reared, and it is to Societies such as ours that the nation will look for guidance and advice when it wakes up, as it is gradually doing, to the practical importance of the subject. In the meantime it cannot be too fully realised that all the resources of our obstetric art should be available for the help and encouragement of those women who are bravely facing their duties as wives and mothers, and by so doing are helping to stem the falling birth-rate. We must see to it that by all means in our power we strive to rob child-bearing of its dangers and anxieties. By so doing we shall encourage women to face this great duty—this noblest and highest duty—with equanimity. I cannot put it better than by quoting a recent writer's words:—"It is now and henceforth our duty to make motherhood a safe as well as a supremely honourable and honoured profession."

I agree with Professor Glaister in believing that "the fertility of the race, if unchecked, is as strong to-day as ever it was, and that parental instinct and love among the well-ordered of the people, are not less keen than ever before."

We now come to the third adventure, viz., *Death*, and with it *Disease*.

What are some of the means at our disposal as obstetricians and gynæcologists to combat morbidity and to avoid early mortality?

It is peculiarly appropriate this year, the year in which the whole world mourns the death of Lister that we in Edinburgh, where so much of his pioneer work was done, should reverently and lovingly recall what he has accomplished in diminishing the morbidity and mortality of childbirth, *when his principles are loyally and faithfully carried out at the bedside*. One would associate with him in

the roll of honour the names of Pasteur, Semmelweis, and Oliver Wendell Holmes, but it is to Lister that we undoubtedly owe the practical application of the great principles which have robbed childbearing of more than half of its dangers, and transcending all else, have thereby rendered tremendous service to the most valuable asset in the world—our women labouring with child. Truly, no one has done more for obstetrics, and for gynæcology than that gentle, unassuming, sad-faced man, whose work has revolutionized the whole world of medicine, and to whom our women in a special sense have daily and nightly good cause (did they but know it), to raise their pæan of gratitude for the unspeakable debt they owe him, and will continue to owe him in ever-increasing degree, to all time. There is not one of us who has not good reason to be thankful for the life and the work of that good man, whose name to-day is honoured and blessed from end to end of the civilized world as “the greatest benefactor of the human race of whom we have record.” If, as Gœthe puts it, “Death is a commingling of Eternity with Time,” then in the death of a man like Lister, “Eternity is seen looking through Time.”

The author of that delightful classic the “*Confessio Medici*,” written some four years ago, has a striking passage about a special privilege that is enjoyed by any doctor who holds a Court Appointment. If he is on his way to the Palace, and his carriage is stopped by the passing of the Household Cavalry he may in his turn stop them and drive straight through the little procession.

“I think we may imagine with reverence an infinitely more impressive scene. It is no earthly troop of Cavalry that comes rushing on. It is a pale horse, and his name that sat on him was Death, and this pale horse and its rider, through the might of God’s spirit granted to him, Lord Lister held up, and stayed, and put to flight.”

But if this is true, and true it undoubtedly is, how is it, may we ask, that our death-rate from puerperal fever still remains so high? We all agree that it is a preventable disease, and we see that in maternity hospitals, septic infection is practically abolished, which is in itself a marvellous transformation, and surely a justification in itself for the successful continuance of maternity hospitals. In general practice, however, the death-rate (as seen by the accompanying tables and charts) remains much as it was in Scotland. Haultain accounts for this in spite of the more general use of antiseptic treatment, by an increase of germs in our surroundings, the result of centralization in our cities and overcrowding, and adds that without antiseptics the results would have been tragic to contemplate.

Dr. Chalmers, Medical Officer of Health for Glasgow, states that his statistics during the last quinquennial period show an increase in puerperal fever. This, he thought, was due to a more rigid interpretation of the Notification of Births Act. The analysis of

his tables made it clear that puerperal fever was occurring in the practice of midwives and nurses at twice the rate which obtained in the practice of qualified practitioners when they had charge of the patients from the beginning.

This, as he points out, is a strong argument in favour of having the Midwives' Bill for Scotland placed on the Statute Book as soon as possible. Champneys has shown that in 1902, when the English Midwives' Act came into force, the death-rate from puerperal sepsis was 118 per million women. In 1907 it fell to 81 per million, showing at the lowest estimate (without calculating for natural increase in population) that in that year, 621 women's lives were saved from this disease alone, who would have died in 1902.

There can be no doubt that if the modern treatment is conscientiously carried out by medical practitioners, nurses, and midwives, puerperal fever would practically cease to exist. If the future makes it more difficult to train all three, is this scourge not likely to increase?

In view of the fact that midwives will in all likelihood become greatly increased in Scotland owing to the provisions of the National Insurance Act, it behoves us to take active steps to see that they are properly trained, and that their practice be thoroughly supervised under a well thought-out Midwives' Act.

It will be seen from the accompanying Charts (most of them compiled by my friend Dr. Burnet) that since the Midwives' Act came into operation in England and Wales there has been a substantial diminution of the death-rates from "Puerperal Sepsis" and "Accidents of Pregnancy and Childbirth," and that the diminution in the death-rate from the former has been greater and more uniform than that of the latter. No doubt the "Early Notification of Births Act" (1907) has had an important influence also in the same direction.

Except in Glasgow, there are no reliable statistics available to show the proportion of cases attended by midwives and doctors respectively. Table VIII gives all the information as to this I have been able to procure. In Edinburgh only 1·7 per cent. of the total births are said to be attended by midwives (the lowest proportion amongst the towns in Scotland), but I cannot but think that the accuracy of this figure is somewhat doubtful.

The nursing element is therefore becoming an increasingly important factor in obstetrics. We have at present better individual nurses than we have ever had, but we want more of that stamp and a more uniform standard of excellency. I do not say that we can possibly get better nurses than many of those of the best type and highest accomplishments whom we all know both in hospital and in private—women on whom the highest training has been implanted on the finest natural qualifications, and whose value to the com-

munity can hardly be over-estimated. These are the kind of women who, along with those other women who adopt the profession of motherhood either directly or as foster-mothers, are the real benefactors and saviours of our race. In many quarters it is the custom to look down on the obstetric nurse, and judging from some of the specimens of so-called midwives one sometimes sees, one can hardly wonder at the low estimate in which some of them are held. If any real progress is to be made this must be all changed. We want the best women for obstetric nurses, or midwives (whichever you choose to call them), and we want them trained in the best modern obstetric methods, for it cannot be fully enough realised that to a great extent "they stand at the very foundations of national well-being." Given a sufficiency of women of this stamp under suitable supervision, and with a due sense of their responsibility, who would be available for every child-bearing woman in the country, puerperal morbidity and mortality would sink to a minimum. The diminishing birth-rate would not then be such a source of anxiety as it is at present owing to the greater saving of infant life that would ensue. In other words we would get results throughout the country comparable with the results now obtained in our maternity hospitals. It would be greatly by this means that we could hope to attain to what I may venture to call an obstetric millennium. Of course there are other complications besides sepsis to be considered, but with a well-trained phalanx of nurses of the kind I have indicated, many more of these complications would be recognized in an early stage, and skilled assistance obtained for their successful treatment. I would here like to say how very much the type of the Queen Victoria Jubilee nurse is appreciated in Edinburgh, and what an amount of good she has done obstetrically and gynæcologically throughout the country. A Midwives' Bill for Scotland could not do better than aim at securing equal competency among those under its jurisdiction, with similar discipline and supervision. In my opinion it should be made a punishable offence for a labouring woman not to have a competent attendant; the pupils of teaching institutions should be included in the category of those qualified to attend.

Under the present provisions of the Insurance Act, we are placed meantime on the horns of a dilemma, for we are faced with the prospect in Scotland of a large accession of midwives who will work under the Act, and at the same time we are threatened, for the reasons I have already given, with the impossibility of adequately training them.

I have already referred to the beneficial effects of voluntary health visitors in the conservation of infant life, and I would again impress the importance of the supervision of midwives in reducing infant mortality and ophthalmia neonatorum. To show the necessity for adequate supervision, I would just quote from a recent inspector's

report, where one midwife was found to have a pocket in her obstetric bag, in which she was in the habit of keeping her false teeth when not in use!

Without entering into statistics, it is safe to say that about 60 per cent. of infantile deaths could with proper care be avoided. In Edinburgh the infantile mortality was 115 per 1,000 births in 1911 (in Glasgow for the same year 136 per 1,000 births), and according to competent authorities it need never exceed 50 per 1,000, as in the meantime an *almost irreducible minimum*, chiefly the result of immaturity. As a medical officer of health has recently said:—"If such mortality were to take place among lambs, a Royal Commission would be appointed and measures would be adopted for preventing such an unnatural mortality. Lambs, however, are frequently worth 50/- each, when six months old: apparently babies are not." There can be no doubt that breast-feeding is surely a powerful measure with which to combat infantile death. It was Marcus Aurelius who said:—"A woman is only half a mother to have merely *borne* a child."

No reference to obstetrics can be complete without some mention being made of Sir J. Y. Simpson's epoch-making discovery of chloroform, and the application of it to the practice of midwifery. Dr. Haultain so fully and eloquently dealt with Simpson last year in his valedictory address, that a passing reference is all that is necessary. Simpson was fully persuaded of the truth of Bacon's aphorism:—"I esteem it the office of a physician not only to restore health, but to mitigate pain and dolours." Right well did he carry out these principles, and thereby win the everlasting gratitude of every sufferer. I wonder how many of our younger fellows have read the collected papers of Simpson on anæsthesia! The deep research, the ingenuity, the imperturbability of temper, and the thorough refutation of (what seem to us nowadays) the extraordinary objections religious and otherwise raised against the humane mitigation of "pains and dolours" at that time, fill one with admiration for Simpson's genius on the one hand, and amazement on the other at the narrowmindedness of those who should have known better.

It is interesting to note that *local anæsthesia* also claimed Simpson's attention so far back as 1848. Whitridge Williams has recently stated that in certain of the toxæmias of pregnancy such as the toxic variety of hyperemesis gravidarum, delayed chloroform poisoning is apt to occur when chloroform has been administered. Be this as it may, and with this possible exception, chloroform is *par excellence* still the best anæsthetic in labour, when given according to Simpson's directions.

Almost all dreamers who have been obliged to watch pain, have from time to time, wondered if any psychological method will ever

be discovered for the transference of pain. Think you, would there be much vicarious suffering if such were the case? If husbands, for example, could vicariously suffer the pangs of labour! would their reply not be like that of the old quaker lady to numerous troubled ones who sought her sympathy and advice?—"My dear, I am so sorry: there is nothing I would not do to ease your distress, except take it."

The puerperal mortality in Scotland *from other causes than sepsis* (Chart II) does not show unfortunately any diminution. It was 3·7 per 1,000 births in 1909, and 3·9 per 1,000 births in 1910, the highest on record since 1855. This may to some extent be explained by the increased mortality from puerperal convulsions in Scotland, which was so fully gone into by Sir Halliday Croom in a very suggestive paper read to us last session, and by Dr. Haultain in his Presidential Address two years ago.

The treatment of syphilis with Ehrlich's salvarsan, and its greater readiness of detection by Wassermann's reaction, promise in time, as Max Nordau predicts, to make this pest, one of the most pernicious to the species in civilized countries, as rare as leprosy, which in the middle ages was likewise a widely-spread endemic disease, and now has almost disappeared from Europe. The importance of this obstetrically and in the saving of infant life is very obvious.

Following on the lines of Ehrlich's work of elaborating chemical compounds which, when introduced into the body, select and kill parasites without exerting a lethal effect on the organs, there has been opened up a new field in the chemo-therapy of tumours. The recent investigations of Neuberg, Caspari, and Löhe on those lines, in the treatment of cancer, will be watched with the greatest interest. It looks as if we may be on the eve of great discoveries in this direction. It seems to me that it is in the region of bio-chemical research that we are to look for further advance in our knowledge and treatment of disease. This is, however, too vast a subject to speculate on now. Czerny has, however, recently sounded a timely note of warning that it is hopeless to expect any method to be capable of influencing the course of cancerous disease in which secondary growths have appeared in the internal organs, and where marked cachexia has supervened. Early *diagnosis* is likely therefore to be no less important in the future than it is at present.

While firmly believing that as years go by gynæcology will become less purely a department of surgery, but will incorporate more medical and preventive treatment with probably an even greater measure of success, yet it must never be forgotten that the brilliant position gynæcology now occupies has been achieved by surgical means, and it is thanks greatly to gynæcology that abdominal surgery has taken the place it has in the surgical world.

Though gynæcological operative mortality has decreased tremendously since Keith's day, yet there seems to have been a tendency for it to rise again recently, owing no doubt to the attempts to deal with malignant disease more radically, attempts which, as Dr. Macan demonstrated to us last session, are already being crowned with a wonderful measure of success.

The effect of Röntgen therapy has been found specially valuable by Döderlein in climacteric hæmorrhage, and Krönig believes its results are so valuable in uterine myomata that it may make operative treatment unnecessary. The benefit seems specially evident in the younger tumours (four to five years old); the older tumours (12 to 20 years old) reacting only slightly. The treatment is contra-indicated in degenerating fibroids and in fibroid polypi. It is doubtful yet whether the action is dependent on a sterilizing influence on the ovaries, or if it is due to a direct influence on the tumour cells.

I fear I have already strained your patience and good nature with the length of these desultory remarks, and it is high time I brought them to a close.

You will see that though much has been done, much, very much remains to do if we are doing our duty to the State and to our noble profession.

We cannot be thankful enough that, as Sir Oliver Lodge has put it, "Anticipation lies ahead to all infinity."

This is equally true in our personal as in our scientific aspirations, and it is that thought which should encourage us to look forward with a cheerful expectancy, and not with gloomy forebodings to the future, for the anticipation referred to is one of good things to come, for which we must strive.

As Horace has it:—

"O beate Sexti,

Vitæ summa brevis spem nos vetat inchoare longam."

The general sense of which has been well brought out in the following lines:—

"Alas a little day is man's,
And time blows mournfullie
O'er human pride and human plans,
What's past, and what's to be.
* * * * *
Never for us may be fulfill'd
Those longings vast, if vain,
Yet we were *brutes* if they were stilled,
And *gods* did we attain."

DEATHS FROM PUERPERAL SEPSIS (England and Wales).

1901	...	2.24	Deaths per 1000 Births		
*1902	...	2.14	„	1000	„
1903	...	1.82	„	1000	„
1904	...	1.80	„	1000	„
1905	...	1.88	„	1000	„
1906	...	1.80	„	1000	„
1907	...	1.66	„	1000	„
1908	...	1.46	„	1000	„
1909	...	1.64	„	1000	„

(a decline of 30 per cent. from the death rate of 1901.)

* Midwives Act.

DEATHS FROM ACCIDENTS OF CHILDBIRTH

(England and Wales).

1901	...	2.49	per 1000 Births		
1902	...	2.34	„	1000	„
1903	...	2.33	„	1000	„
1904	...	2.14	„	1000	„
1905	...	2.34	„	1000	„
1906	...	2.27	„	1000	„
1907	...	2.24	„	1000	„
1908	...	2.09	„	1000	„
1909	...	2.14	„	1000	„

(Not including puerperal deaths where kidney, cardiac, pulmonary, or other intercurrent affections produced fatal results during pregnancy, and which are included in Scottish puerperal statistics.)

ALL DEATHS FROM PUERPERAL SEPSIS AND ACCIDENTS OF

CHILDBIRTH (England and Wales).

1901	.....	4.65	per 1000 Births
1902	.....	4.54	„ 1000 „
1903	.....	4.09	„ 1000 „
1904	.....	3.93	„ 1000 „
1905	.....	4.20	„ 1000 „
1906	.....	4.04	„ 1000 „
1907	.....	3.90	„ 1000 „
1908	.....	3.67	„ 1000 „
1909	.....	3.77	„ 1000 „
1910	.....	3.56	„ 1000 „

ANNUAL DEATH-RATES FROM PUERPERAL SEPSIS AND ACCIDENTS OF
 CHILDBIRTH TO A MILLION PERSONS LIVING IN SUCCESSIVE QUIN-
 QUENNIA, 1876—1910 (England and Wales).

For the 5 Years

1876—1880	...	...	...	142·0
1881—1885	...	...	...	165·0
1886—1890	...	...	...	142·6
1891—1895	...	...	...	167·8
1896—1900	...	...	...	137·6
*1901—1905	...	...	...	120·4
1906—1910	...	...	...	97·8

During the 10 years 1897—1906 Puerperal Fever and the
 Accidents of Pregnancy and Childbirth caused the death of 1 Mother
 to every 228 Births in England and Wales.

1907 ... 1 Mother to every 261 Births.

1908 ... 1 Mother to every 280 Births.

1909 ... 1 Mother to every 270 Births.

REPORT OF M.O.H. FOR GLASGOW, 1910.

Attended by			Puerperal Fever Cases		Rate per 1000 Births
Doctors	...	10,399	...	31	3·0
Midwives...	...	12,446	...	82	6·6
		22,845	...	113	4·8

REPORT OF M.O.H. FOR GLASGOW, 1911.

Attended by		Births		Puerperal Fever Cases		Rate per 1000 Births
Doctors	...	10,353	...	44	...	4·2
Midwives	...	12,133	...	89	...	7·3
		22,486	...	133	...	5·7

VIII. SHEWING RELATIVE PROPORTION OF CONFINEMENTS ATTENDED
 BY MEDICAL MAN AND MIDWIFE (CERTIFIED AND UNCERTIFIED) IN
 THE UNDERNOTED PLACES.

				Doctor		Midwife
Glasgow	...	...	...	46	...	54
Perth	...	...	...	72·7	...	27·3
Ayr	...	...	...	50·6	...	49·4
Renfrewshire	...	...	...	82·1	...	17·9
London	...	...	...	75—	...	25·+
Derby	...	...	about	25	...	75
Coventry	...	...	...	20	...	80
Liverpool	...	...	...	26	...	74
Nottingham	...	...	...	45	...	55

Average of above ... 50·8 ... 49·2

* Midwives Act, 1902.

CHART I.

PUERPERAL SEPSIS - SCOTLAND

CHART II.

OTHER PUERPERAL CAUSES - SCOTLAND

CHART III.

CHART IV.

CHART V.