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EUGENICS AND THE FUTURE PROGRESS OF MAN

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etc., etc.*

INTRODUCTORY

THE past history of man is far from being a record of continuous and uninterrupted advance. On the contrary, there are many points where the main track has been left and a pathway followed which has diverged further and further from the line of real progress. In some cases the error has been seen in time, and the high road again reached after a painful struggle; but in not a few the discovery has come too late to avert the consequences which must inevitably follow any prolonged disregard of Nature's laws. In fact, for over seven thousand years at least, human history has been one long record of the birth, growth and decline of nation after nation.

Although many causes have contributed, there can be no doubt that the essential factor underlying this national progression and retrogression has been the condition of the people. The form of government, the nature of the laws and social institutions, the manners and customs, the religion, in short the whole environment of a people, must be regarded not as immediate, but as intermediate factors, as means to an end; and they must be judged solely and simply by their effect in bringing about advantageous or adverse modifications in that people's condition.

This being the case, and I do not think it can be questioned, it is obvious that the problem of the past and future development of man becomes, at its root, a biological one. What are the biological principles of development can no longer be doubted. They have been clearly revealed by the researches of Darwin,

Wallace, and many other enquirers, and I believe there are few conceptions of greater importance to man than the extension of the doctrine of evolution to the human race. For evolution not only denotes and explains a past, it also implies a future, and what is of still more importance, it points the road to that future. It is with this future development of man, and the principles underlying it, that I propose to deal.

VARIATION AND SELECTION

Although some of the details of the evolutionary process may be still unknown, that it is dependent upon two main principles, namely, variation and selection, admits of no doubt. These principles are fundamental to all the evolution of the past, whether of man or the lower animals, and they must of necessity lie at the root of all the development of the future. They are even the basis of the evolution and dissolution, the supremacy and decline, of nations. It is necessary, therefore, briefly to consider them.

Variation has been defined as "the occurrence of individuals differing from the type proper to their race or species." It is a self-evident fact that individuals differ. There are probably no two human beings in existence who are precisely similar in body and mind. Many of these differences, as will be seen presently, are modifications resulting from the action of the environment. Others, however, are innate; they are fundamental differences of constitution which are germinal in origin and which are capable of being transmitted to subsequent offspring. It is to differences of this latter kind that the term variation is applied.

The question of the causation of these germinal variations is of extreme interest and importance, but as it is not material to my present purpose I do not propose to discuss it.

It is probable that, in the great majority of human beings, these variations are so slight as to make but little practical difference to the condition and prospects of the individual. But in other cases they are much more pronounced, and they then occur in one of two directions.

In the first place the variation may be a *progressive* one. By

this I mean that the individual, in consequence of having a greater potential energy and power of adaptation, of being more immune to disease and more capable of withstanding the vicissitudes of life, is placed at an advantage in that struggle which is not only inseparable from existence but is one of the chief factors in determining progress. It is probable that in some of these cases the variation may take the form of a tendency to the more ready acquirement of some particularly advantageous quality; but on the whole I think we shall be more correct in regarding such progressive variations as connoting an increased adaptability and vitality—a greater power of making the most of the environment of the time.

In the second place the variation may be a *retrogressive* or pathological one. It then results in an individual of diminished potential energy and power of adaptation, of one who is not only incapable of making headway, but is unable to meet the ordinary strain of life. Here again there may be a tendency to the development of certain particular anti-social qualities, but on the whole our best conception of the condition is probably that it is one of inherent weakness and lessened adaptability. Such persons may be termed the “unfit.”

In some cases this unfitness is chiefly mental, in others it is chiefly physical; usually, however, it is shown in a defective vitality of both mind and body. In this respect it is interesting to note the close relationship which exists between mental and bodily development. The mentally degenerate, as a class, are inferior in weight, stature, and general physical development to the most inferior class of the general population. In addition they evince an increased proneness to disease and a diminished power of recovery. In spite of the excellent feeding, clothing and general surroundings of the inmates of public lunatic asylums, which are usually far superior to those of the same class in the outside world, the mortality rate of the insane is six times greater than that of the general population. The Commissioners in Lunacy are quite justified in saying: “It would seem as if mental deficiency were allied with physical inferiority and a lessened power of resistance.”

It is not difficult to see why mental unfitness should be so

common in these pathological variations. The human mind is the highest, the latest, and the most delicate evolutionary achievement. The complexity of its tissue is marvellous, and for its harmonious working the most delicate adjustment of every single part is essential. It is not surprising, therefore, that a pathological condition of the germ plasma should so frequently be accompanied by disorder of mind. The degree of this disturbance varies within wide limits. It may be merely a diminution of nervous vigour, so that the individual is apathetic, lack-a-daisical and spiritless; of such material many of our loafers, chronic paupers and ne'er-do-weels are made. They simply follow the line of least resistance. The nervous tissue may be so unstable as to collapse readily under the pressure of modern civilisation, and then we have neurasthenia, epilepsy and insanity. It may be such as to render the individual incapable of conforming to the moral and legal codes of society, and most moral imbeciles and habitual criminals are of this type. Lastly, there may be an actual arrest of mental development, and then we have idiocy, imbecility and feeble-mindedness.

Such, then, are the two chief forms of variation. It is obvious that those of the first kind—the fit—are essential to progress; that if the race is to develop it must give rise to individuals who can do more than mark time, who can advance. On the other hand it is equally obvious that the pathological variations—the unfit—are inimical to progress. They are incapable of advance, they are falling by the way in the march of civilisation. They may actually impede a nation's advance by withdrawing for their support the energy and resources of the more capable members of the community. There can be little doubt that the future of any society will be dependent upon the relative preponderance of these two variations.

Now although there have been many ups and downs in the past history of man, it is clear that, on the whole, considerable progress has been made. Man to-day stands on a much higher plane of development than did his paleolithic ancestor. The human race has undergone a progressive evolution. If we assume that variations like those described have always occurred, and it is difficult to assume otherwise, it necessarily follows that

by some means or other in times past the progressive variations have been encouraged, and the retrogressive variations eliminated, or at all events kept within reasonable bounds. This brings us to the second fundamental process in evolution, namely, selection.

Selection may act in two ways, either through a differential birth rate or a differential mortality rate. In other words the unfit members may have been naturally less fertile than the fit, or their propagation may have been checked by a higher rate of mortality. There is no evidence whatever that the unfit are naturally less fertile. It is true that the final stage of degeneracy (*i.e.*, idiocy) is often sterile, but the stages short of this are quite as prolific as are ordinary healthy members of mankind. The explanation would therefore seem to be that the propagation of the unfit has been in some way checked, and there can be no doubt that this is what has happened.

In primitive states of society it appears to have been an almost universal practice to kill all children who were delicate or deformed. Even in the present day there are many savage tribes which habitually destroy their weakly members, both children and adults. But the custom was by no means confined to primitive man, for there were few of the ancient nations which did not expose to death their superfluous female and their sick and deformed children. The ancient Greeks adopted this practice for the common good, and the destruction of such children was decreed by the Roman laws up to the time of Valentinian.

In addition to this judicial infanticide, however, there were other means which tended to eliminate the weakly members of the community. In the days when physical strength and hardihood were essential to existence, when courage and cunning in high degree were necessary to evade or vanquish the human or animal foe, there was little chance of any but the fittest surviving to propagate their kind. Even at a later date, when some semblance of civilisation had appeared, might still continued to be right, and the person who was incapable of looking after himself, or of taking his share of the burden of the day, met with but scant consideration. Everything conspired to bring about the elimination of the unfit.

With the further growth of civilisation, and particularly

with the modern conception of Christianity, a great change took place which gradually but surely resulted in the life and safety of the individual being no longer dependent upon the possession of brute strength or mental capacity. But Nature forged a new weapon whereby the elimination of the unfit was still secured. Civilisation was accompanied by a complete change in the habits and mode of life of the people. There was a steady migration from the land, and persons who had formerly conducted their work in the fresh country air now became aggregated to form dense and insanitary towns. The entire conditions were in the highest degree inimical to health, with the consequence that disease became exceedingly rife.

Those diseases were, of course, incident upon the fit as well as the unfit, the adult as well as the child, and although it is certain that the mortality would be greater amongst the delicate and degenerate than amongst the vigorous and strong, it may be argued that, since disease cripples and impairs the fit, as well as weeds out the unfit, it may have been productive of harm rather than good to the race. However much this may be the case to-day, when the resources of medicine and surgery are able to save alive those who have been maimed in the encounter, I doubt whether this was so in times gone by. When medical and surgical skill were of the crudest kind I am inclined to think that patients stricken by disease either died or made a fairly complete recovery, that it was kill or cure, and that the issue was chiefly dependent upon the vigour of the patient. I think, therefore, that disease has played a very important part in progressive evolution by purifying the race of its weaker members.

Even in the present day we have an illustration of this process in that terrible scourge consumption. It is calculated that in the United Kingdom no less than 90,000 people die annually from some form of tuberculosis. This number is enormous, and yet clinical experience and post-mortem examinations give reason for thinking that probably another 90,000 become infected with the disease but make a complete recovery. What is the explanation? No doubt our methods of treatment have enormously improved, but the result, kill or cure, really depends to a very great extent upon the vital resistance of the individual.

The majority of persons of sound constitution will, under proper treatment, recover from consumption with very little impairment. The majority of those of enfeebled constitution will die in spite of any treatment. In some cases the inability to throw off tuberculosis may be special and not part of any general unfitness; but in most instances it is part and parcel of a general constitutional want of vigour. As showing this we may refer to the correlation between consumption and mental degeneracy. Of all the deaths in a most excellently managed institution for the feeble-minded no less than two-fifths were from tuberculosis, whilst the mortality from this cause amongst the insane in asylums is at least nine times as great as amongst the general population. And yet the attendants upon these persons very rarely develop the disease.

At the same time it is clear that the factors which have eliminated the unfit have operated to the advantage of the fit. Whether the weeding out has been due to conscious selection, to the oppression of the weak, to their inability to keep afloat in the current of progress, or to disease, all those individuals who have been strong enough to hold their own, who have had the intelligence and capacity to adapt themselves to the changing environment of their times, or the physique to come unscathed through disease, all these have been placed at an advantage which has encouraged their propagation, and in so doing has contributed to the advance of the race.

THE PRESENT CONDITIONS

Such, then, are the chief means by which, in times past, the fit have been selected and the unfit rejected. Let us now consider the state of affairs at the present time; and here I shall deal solely with our own country.

Judicial infanticide has of course been abolished. Little has been heard of it in civilised countries since the time of Valentinian, the Roman Emperor. Dark mutterings regarding "lethal chambers" are occasionally audible, but the person who ventured to adopt such measures, no matter how diseased, deformed or degenerate the subject, would certainly be convicted of murder.

But, further, unfit children are not merely allowed to live, they are encouraged to do so. The people are taxed, and taxed

heavily, in order that every resource of modern science shall be available to keep alight the feeble flame of life in the base-born child of a degenerate parent. And this not merely in cases where there is a doubt about the future, but in cases where, if heredity means anything at all, there is abundant evidence that such a child will lead a parasitic existence, and be a burden to the State, to the day of its funeral. Indeed the burden cannot be said to end there, for measures which render the conditions of life easier for these persons must inevitably tend to encourage their propagation, and it is in the highest degree improbable that they will pass off the stage without contributing more than their share of offspring to posterity.

It is not too much to say that the whole tendency of modern times is to disregard the race and concern itself with the individual, and not so much to encourage the fit individual as to succour the unfit. It is impossible to look round without seeing that the entire country, from John o' Groats to Land's End, is flooded with institutions, societies and agencies, not for the betterment of the fit, but for the care of the unfit; agencies whose chief mission is to provide shelter, food, clothing, comforts, medical treatment and other forms of assistance for those of proved mental, physical and social incapacity; and even for those who, having the capacity, will not exert it.

These persons pass their time between so many different institutions, and they receive help in addition, from such a diversity of private and unofficial sources, that it is utterly impossible to estimate their cost to the community. Some idea of this, however, may be gathered from statistics of Poor Law expenditure. During the past fifty years the annual cost of this has risen from £8,000,000 to over £16,000,000; or, notwithstanding the increase of population, whereby the expense is spread over a greater number of people, the rate per head of the general population has risen from 6s. 8d. to 8s. 4d.

This burden, which refers to Poor Law expenditure only and which takes no account of unofficial relief, falls chiefly upon the shoulders of the fit, and it is certain that it must have a very considerable adverse influence upon their development and propagation.

I have no hesitation in saying, from personal experience, that nowadays the degenerate offspring of the feeble-minded and chronic pauper is treated with more solicitude, has better food, clothing and medical attention, and has greater advantages than the child of the respectable and independent working man. So much is this the case that the people are beginning to realise that thrift, honesty and self-denial do not pay.

PRESENT INDICATIONS OF DEGENERACY

From this short outline of the present conditions I think it will be admitted that the weapons forged by Nature to bring about the betterment of the race have, one by one, been taken out of her hands. It is not too much to say that the former conditions have been completely reversed, and that, at the present time, they are such as to encourage the unfit and discourage the fit. I have dealt chiefly with the masses because in their case the problem is a double one. The failure to eliminate the unfit amongst them not only contributes to the growth of degeneracy, but, since these individuals are devoid of the means of support, their presence throws an ever-increasing burden on, and therefore interferes with the progress of, the fit. But degeneracy and unfitness are by no means confined to the "masses," they are prevalent amongst the "classes"; and here also we see no attempt made at elimination and nothing done to check the propagation of the insane, the diseased, and the incapable. It is quite obvious that the whole circumstances of the country are such as to favour degeneracy; the question we now have to ask is whether there is any indication that such is really on the increase.

This is obviously a very difficult question to answer. Retrogressive variations are chiefly evidenced by a deterioration of the power of adaptation, of vitality and of character, by an inability to reach the ever-increasing "standard" of a progressive civilisation, and these are conditions which do not readily lend themselves to statistical demonstration. It is probable that when degeneracy is present in a nation to such an extent as to be easily recognisable, the condition of that nation is beyond hope of redemption. Fortunately England is not in that parlous state;

but there are some facts, to which I shall now allude, which certainly seem to show that the condition of the people of this country is far from satisfactory, and which cannot but give rise to grave anxiety concerning the future.

Let us consider mental incapacity; and I will first of all deal with *the insane*. I do not, of course, suggest for a moment that every person who becomes insane is a degenerate. Disease of the mind, like disease of the body, may strike down the fit as well as the unfit; but it cannot be denied that the majority of people who become insane do so, not because of any particular stress or strain, but because of an inherent nervous weakness and a fundamental incapacity; because, in short, they are the victims of a pathological variation of the germ plasm. And mental incapacity has this additional significance, it is not merely a sign of deterioration, but it indicates inferiority in that very faculty which is vital to success under present conditions, and which must be still more vital with the future advance of civilisation. Everything points to the fact that the future development of man must be chiefly on mental rather than physical lines.

Until the last few years the increase in insanity, as shown by the annual reports of the Lunacy Commissioners, was truly alarming, and out of all proportion to the increase in population. In considering these reports, however, it has to be remembered that they do not relate to all insane persons, but only to such as are certified and under the jurisdiction of the Commissioners—which is a totally different thing. There is not the slightest doubt that there has been a greater tendency in recent years to make use of the legal instrument of certification; there is equally no doubt that the decline in the rates of death and of recovery has led to the accumulation of patients in asylums; and both these causes have contributed to swell the numbers of the official insane. Much of the increase in insanity, therefore, is certainly fictitious. It is difficult, indeed impossible, to make accurate corrections for these disturbing influences, and to say whether insanity is or is not really more prevalent. Perhaps on the whole one of the most delicate tests is afforded by the ratio of first admissions, and a comparison of these for the past ten years (the period for which statistics are available) shows that there has been no decline.

So that even if the amount of insanity has not actually increased, its continued high prevalence is a very disquieting fact.

As I have remarked, however, the insane persons known to the Lunacy Commissioners by no means include all the mentally defective in existence. Over and beyond these there is an even more numerous class composed for the most part of persons who suffer from a still more serious condition, inasmuch as their incapacity is not possibly temporary but is permanent and incurable. These are the feeble-minded. Until lately the number of this class was quite unknown, but the special enquiries instituted by the recent Royal Commission now enable them to be estimated with approximate accuracy. If the number of these persons be added to the official insane just mentioned it is found that on January 1st, 1906, there were at least 284,000 mentally affected persons in England and Wales, corresponding to one affected to every 120 normal citizens.

Let us now turn to another condition in which this innate incapacity for progress frequently shows itself, namely, *pauperism*. With regard to the incidence of this, the Royal Commissioners on the Poor Laws, in their recent report, say: "Some satisfaction may be derived from the reduction of the ratio of pauperism to population since the early seventies, but it should not be allowed to obscure the facts that the amount of the decrease is rapidly diminishing, that from 1901-2 to 1905-6 there was a continuous increase in the ratio, and that the number of persons relieved has considerably increased during the cycle of the last ten years."

And it is to be remembered that these remarks apply to official pauperism only. Over and above the number relieved by the State, there is a very large class which is assisted unofficially by private philanthropy and various charitable agencies. This number it is impossible to calculate, but when we consider the enormous growth of Hospitals, Homes, Charitable Societies and Committees, when we bear in mind the continuous expansion of such relief agencies as those of the Church and Salvation Armies, it is impossible to come to any other conclusion than that there has been a very real increase in the proportion of those persons who are unable, or unwilling, to subsist by their own efforts.

Here, again, I do not allege that every person who receives

Poor Law assistance is a degenerate. As a matter of fact the causation of pauperism is highly complex. It is partly the result of economic conditions, partly of disease and physical ill-health, and partly of defective character, that is, want of grit and to mental and moral incapacity.

With regard to economic causes, although there have been several waves of unemployment in recent years, yet it cannot be said that unemployment has been either greater or more persistent than at former periods. On the other hand there has been a general, and in many cases a very considerable, increase in the rate of wages; whilst the cost of living, with the exception of the last few years, is on the whole appreciably less. The chief advance has been in rent and rates; but in spite of this it is impossible to deny that, on the whole, the general economic conditions are more favourable to the existence of the indigent, and not less so, than they were a generation ago. Plainly then the cause of the continued high prevalence of pauperism in this country cannot be regarded as primarily economic. To what is it due? It must be to either physical or mental incapacity. There are, I think, reasons for considering that in spite of the greatly improved environment and of the advances in sanitation and preventive medicine which have taken place during the last two generations, the number of the physically unfit is greater than it used to be. The cause probably lies in the fact to which I have already alluded, namely, the increased preservation of delicate and weakly individuals. To a certain extent, therefore, physical unfitness and ill-health may have contributed to the increase of the socially incompetent class. But it is extremely doubtful if this is the only explanation; it is doubtful indeed if it is the chief explanation. The real underlying cause of the great bulk of the pauperism of this country, and of the increase which has taken place in recent years, would seem to be rather a mental than a physical inadequacy, a want of grit and a deterioration of that fine sturdy independence which was once such a prominent characteristic of the people of Britain. The Royal Commission on the Poor Laws received a good deal of evidence from all parts of the country as to the causation of pauperism, and one chapter in their report is devoted to this

subject. It is impossible to read this evidence and the statements of the Commissioners without coming to the conclusion that the main cause of pauperism, and of its recent increase, is not unemployment nor economic conditions but—defective character.

It cannot be denied that in many cases this deterioration has been fostered by external causes. Many chronic paupers are capable of effort, and the blame for their condition must rest not so much upon them, as upon a sickly sentimental society which foolishly deprives them of the incentive to this effort. Indiscriminate assistance, whatever guise it takes, has done untold harm in deteriorating character and making paupers. The same may be said of the pernicious hire purchase system, of cheap amusements, and of the hundred and one ways by which working people are nowadays beguiled into buying things they cannot afford, and do not really want. Our modern education has created a multiplicity of artificial wants, but it has done practically nothing to teach habits of thrift and prudence. All these things, plus alcohol, have had the effect of weakening character, destroying self-reliance, and often enough inculcating dishonesty.

But although these factors frequently precipitate pauperism, it is doubtful whether they are often the real cause. The cause, in the great majority of instances, lies in an inherent weakness of will and want of moral fibre, in an innate defect of character whereby the individual inevitably takes the line of least resistance. And this deterioration is, in most cases, but another manifestation of that same pathological variation of the germ plasm to which I have referred.

It seems probable that the increase in *crime* which has taken place in recent years is largely due to similar causes. The Judicial Statistics for the year 1909 show that, whilst for the five years 1894-8 the annual average number of persons tried for indictable offences was 52,208; for 1899-1903, 55,018; for 1904-8, 62,000; for the year 1909 it was 67,149.

No doubt, as is stated by Mr. H. B. Simpson in the above report, the growth of an exaggerated sentiment towards criminals has done not a little to foster this class, just as it has in the case of paupers, but there can be little question that much

of the increase must be attributed to the presence of persons who are defective in moral and mental character. For many such the pathway of crime becomes the line of least resistance, and the more lenient attitude of modern society only tends to make this pathway still easier. As Mr. Simpson himself says, the average thief is "a man who is not very different from the rest of the world except perhaps in having rather less moral principle than others . . . and who follows an anti-social mode of life not altogether from an innate perversity, but in the belief that, as things are at present, crime offers on the whole an easier means of living than any other that is open to him." And again: "The criminal class is largely composed of men who from weakness of character have succumbed to temptations which others in similar circumstances are able to resist."

Clearly there is something radically wrong when, in spite of better economic conditions and a greatly improved environment, in spite of the enormous sums which are spent each year upon primary education and the health and morals of the country, there should be an increase of crime and of pauperism, and certainly no decrease of insanity.

We may now turn to some evidence pointing in the same direction which is derived from a totally different source, namely, from statistics regarding *infant mortality*. I do not here propose to discuss whether a high mortality of infants does or does not aid in the survival of the fit. I will merely say that whilst there cannot be the slightest doubt that the attention which has been directed to this matter during recent years has had the effect of snatching from the jaws of death many thousands of delicate and defective children, who in former times would assuredly have perished, yet on the other hand this attention has just as certainly been the means of saving many of the inherently fit. For the chief cause of the excessive death-rate of infants is not disease, but ignorance, neglect, and mismanagement. The point I wish to refer to is the number of children dying from an inherent defect of vitality.

As is well known, since the year 1900 there has been a marked decline in the infant mortality rate. This decline is a tribute, and a very gratifying tribute, to the science of preventive

medicine and to the greater efforts which are now being concentrated upon the requirements of child life; but it would be quite fallacious to look upon it as indicating any improvement in the inherent vitality of the children who are now being born. On the contrary, the returns of the Registrar General show most clearly that the proportion of deaths resulting from innate defects of constitution is as high to-day as it was thirty-five years ago. Making due allowance for differences of nomenclature, by considering all such cases together under the general heading of "immaturity," it is found that out of every 1000 children born to-day there are as many die from this cause as there were in 1873. And the proportion is by no means insignificant, it is more than one-third of the total number of deaths. But, as I have just remarked, it is quite certain that many delicate children are reared to-day who would formerly have perished; if, therefore, we find that there are still as many deaths from this cause, it necessarily follows that the number brought into the world must be greater, and that there is an increase of degeneracy. The continued high death rate from "immaturity" is capable of no other explanation.

It may be argued that the increase in non-viable children is due to an adverse state of the mother during gestation. I fully admit that this is a factor having considerable influence upon the child, but it has to be remembered that the conditions under which women live and work in the present day, are certainly no worse than they were one or two generations ago. On the contrary, in respect of food, in respect of occupation, and in respect of environment generally, they are a great deal better; so that it seems futile to invoke this as the cause. The administration of a certain group of drugs known as "ecbolics" has been credited with this high prevalence of non-viable children, but the evidence in favour of this is quite inconclusive. On the whole, it is difficult to avoid the conclusion that the weakness of these children is really hereditary, and due to a deterioration of the germ plasm.

Let us now consider the *Birth Rate*, for, in addition to throwing light upon the present, this will enable us to see what prospect the future holds out. As is well known, there has been

a steady decline. In the year 1876, the birth-rate per 1,000 population stood at 35; since then it has steadily fallen, until in 1909 it was only 25.6. The death-rate has fallen also, but not to the extent of compensating for the diminished additions to the population; and if we regard the question merely from the point of view of growth of population, it has to be admitted that the life saving consequent upon the improvements in sanitation and in medical and surgical treatment of the past fifty years, has been completely nullified by the decline in the birth-rate.

It has been argued that a diminishing birth-rate may not be a disadvantage. It has been contended that if the fewer children being born are receiving greater care, and if this means a greater possibility of development, the result may actually be a national advantage. In other words, that the question is not so much one of the quantity as of the quality of the children born. Without subscribing to the statement that quantity is of no significance, we may fully admit the importance of quality. It becomes necessary, therefore, to ascertain what kind of children are being produced. Has the decline in the birth-rate been incident upon all classes of the community equally, or has it affected some and not others?

There is the clearest evidence that not only has the decline been a differential one, but that it has been in the wrong direction.

In the first place, it is not only apparent from official statistics, but it has been specially shown by Mr. David Heron and Professor Whetham that the decline has been chiefly marked in the most capable, most cultured and most intellectual classes. Mr. Heron, as the result of a very thorough investigation into twenty-seven districts of London, concludes that "the wives in the districts of least prosperity and culture have the largest families, and the morally and socially lowest classes in the community are those which are reproducing themselves with the greatest rapidity." It is possible that, for many years at any rate, some discrepancy of this kind has existed, but "the causes which lead the poorer stocks of the community to reproduce at a greater rate than the better stocks have increased by nearly 100 per cent. during the past fifty years."

Professor Whetham, working by a totally different method, arrives at the same general conclusion. He has shown emphatically that not only amongst members of the peerage and baronetage, but also amongst the most capable members of the learned professions and of the official and commercial classes, there has been a marked and serious decline in the number of births.

Again, some ten years ago I drew attention to the fact that whilst the average number of children in a family throughout the whole population was 4·63, the average number of children born in a mentally degenerate family was 7·3, or considerably more than half as many again. And this fact has since been corroborated by other enquirers. I have recently attempted to ascertain whether the same holds good in the case of people who are not of ascertainable insane stock, but who are thriftless, lazy and generally lacking in any desire to make headway. The actual number of families I have hitherto succeeded in investigating is small, but I found that in the case of forty-three couples of the working class who may best be described as incompetent and parasitic, there were 322 children now living, or an average of 7·4 per family; whilst in the case of ninety-one thrifty and competent working-class families there were 342 children now living, or an average of 3·7 per family. It will be seen that these results are strikingly similar to those obtained in the case of the insane.

Mr. Sidney Webb has arrived at a similar conclusion from an analysis of the lying-in claims paid to members of the Hearts of Oak Benefit Society. This Society is the largest of its kind in the kingdom, and is composed of industrious, thrifty and healthy artisans. It may, in fact, rightly be considered as representing the cream of the artisan class. The Society provides a "lying-in" benefit of 30s. for each confinement of a member's wife. From the year 1866 to 1880 there was a slight increase in the ratio of lying-in claims to the number of members; but since 1880 it has steadily declined. As Mr. Webb says: "The birth-rate among the population of a million and a quarter persons, distinguished from the rest, so far as is known, only by one common characteristic, that of thrift, has fallen off between 1881 and 1901

by no less than 46 per cent. ; or a decline nearly three times as great as that during the same period in England and Wales. Taking the whole period of decline, from 1880 down to the latest year for which I have the statistics, 1904, the falling off is over 52 per cent."

I think there is no need to labour this question any further. Sufficient has been said to show that the decline in the birth-rate is not uniform throughout the community, but that it is practically confined to the best elements; and that the worst elements, the insane, the feeble-minded, the diseased, the pauper, the thriftless, and in fact the whole parasitic class of the nation, are continuing to propagate with unabated and unrestricted vigour.

Just one other point which is not devoid of importance in considering the character of the people composing this country. During the year 1908, 231,327 persons of British and Irish nationality left these shores to seek a home abroad. No doubt some of these were wastrels, but there is equally no doubt that the bulk of them were people of initiative, enterprise and capacity beyond the ordinary standard of their class. During the same year 342,922 persons entered the country ; one-half of these were British and Irish, but the remainder were foreigners. I do not deny that many of these foreigners are capable, industrious and honest persons ; but I am also perfectly certain that a very large proportion of them are the scourgings of Europe, and immeasurably inferior to the British people whose place they fill. The explanation of this migration is that the conditions of life here are becoming more and more easy for the unfit, whilst the conditions of life in our colonies offer better prospects for the fit.

I have no wish to over-state the case, and I fully recognise the difficulties which must necessarily attach to any attempt to form a judgment upon the condition of a nation. I am afraid, however, that it is impossible to avoid the conclusion that degeneracy is on the increase in this country. Unquestionably degenerates are to be found in every civilised nation, and I do not doubt for an instant that England produces to-day as capable and industrious, as thrifty and enterprising,—in short, as *fit*—citizens as ever she did. Citizens, moreover, who only want the opportunity

to attain a still higher standard of development. But, and this is the important point, all the indications point to the fact that the present conditions favour the unfit to such an extent that they are increasing in greater ratio than the fit. Degeneracy will soon preponderate. It has been calculated that if the relative rates of increase which at present obtain between the fit and the unfit be continued for three more generations, every 1,000 fit citizens to-day will then be represented by 687, whilst every 1,000 unfit will be represented by 3,600. In spite of the fact that disease has been lessened and the expectation of life prolonged, that a marked reduction has been effected in the wastage of child life, that the social condition and general environment of the people has been rendered more favourable,—or can it possibly be *because* of these things?—the stream of degeneracy is steadily increasing, and is threatening to become a torrent which will swamp and annihilate the community. It is quite clear that we are face to face with a most serious problem; one, indeed, of vital importance, not merely to our future progress, but to our very existence.

THE REMEDY—EUGENICS

What is the remedy? I do not for a moment suggest that we should revert to the methods of primitive man and that we should withhold from these degenerates our sympathy and help. Although it may well be that sentiment has become sickly, and that virtue itself, being misapplied, has turned to vice, yet we must remember that these humanitarian feelings are the very basis of our civilisation, and that we cannot throw them overboard without grave danger of undermining that civilisation. To cease to protect the weak or care for the helpless and suffering would be to lapse at once to a state little removed from savagery.

At the same time it is clear that the presence of these degenerates constitutes a grave danger to civilisation and to the future progress of man. What, then, must be done? I think the course is clear. Whilst extending to them our ready compassion, and whilst treating them with humane care, we must, in the interests of posterity, take such steps as will ensure that they

do not propagate their kind. In other words we must apply the principle of selective breeding.

It is this which is the object of Eugenics; a science for which we are indebted to the late revered Sir Francis Galton. Eugenics is based upon the two fundamental principles of evolution, namely variation and selection. It recognises that there are two types of mankind, quite regardless of their social status, namely the fit and the unfit; and it seeks to advance the progress of man by encouraging the breeding of the fit and restricting that of the unfit. It is the chief method by which the defects incident to civilisation can be remedied, and the further advance of man secured. *It is the antidote to degeneracy.* It is perfectly certain that the nation which first applies these principles will gain such an ascendancy that it will rapidly become the dominating and supreme power and be the one to continue the further progress of man.

It is seen that Eugenics has two aspects, which have been called *Positive* and *Negative*. As has been well put by Mr. Montague Crackanthorpe, Positive or Constructive Eugenics teaches "one generation to be at once the architect and the builder of the rest, using the best available materials"; whilst Negative or Restrictive Eugenics "teaches the restriction or restraint of marriage whenever and wherever the materials to hand are so inferior that they ought not to be used at all."

Space does not permit me to deal at length with all the issues raised by these two definitions; I shall therefore confine myself to their salient features. In the first place, it seems desirable to remove a little misunderstanding. Eugenists are sometimes charged with professing to "breed qualities." I do not think they lay claim to any such omnipotence. Most sensible Eugenists, whilst affirming the tremendous importance of heredity in the development of the individual, fully recognise that the environment also plays a part, and that in fact every individual is a product of both these influences. No animal produces offspring with such a relatively undeveloped brain as does man, and I look upon this plastic condition of the brain, provided it is healthy, as connoting a very considerable capacity for being moulded by the environment, and for being influenced

by education and early training. Indeed it seems to me, that it is to this essentially human characteristic that no little of the social progress of man is due.

But there is a limit to the effect which the environment is capable of producing in the individual. Although at birth the brain is very incompletely developed, nevertheless there is certainly resident within its embryonic cells a capacity for growth, and a tendency for that growth to take place more readily along certain lines than along others. Both these are inherited, and hence heredity does, to a very great extent, predestine both the nature and the degree of mental development.

The surroundings of an individual may be such as to encourage to the utmost this innate tendency to growth, or they may be such as to keep it in check. They may be such as to favour development in the direction of the inherited tendency, in which case the individual is likely to acquire the mental traits of his ancestors. On the other hand the environment may be such as to frustrate evolution along those particular channels and to force it into others, in which case he will acquire mental characteristics more or less dissimilar from those of his progenitors. But the environment cannot add anything to the original inherited capacity; it can only give or withhold the opportunity for the development of that capacity. Or again, it can only overcome the inherited tendency to develop in a particular manner when its whole force is in a contrary direction—and not always then.

With regard to the fit and the unfit, it is my opinion, and I believe that of most Eugenists also, that whilst these conditions are to a certain extent dependent upon the environment of early life, they are much more dependent upon the condition of the germ plasm—upon heredity. In most cases industry, perseverance, intelligence and general civic worth are the products of good seed; whilst insanity, feeble-mindedness, chronic pauperism, habitual criminality and general social incapacity are the products of bad seed. I fully admit that there are exceptions to this general statement; for instance, it is not every successful stockbroker, or even politician, whose perpetuation is desirable; it is not every pauper or even madman who should necessarily

be debarred from propagation. There is great need for further systematic enquiry, and especially for the careful compilation of family histories. Until this is done, and until a definite clinical type has been clearly associated with morbid heredity and germinal impairment, no wholesale application of the principles of Eugenics is possible. The point I wish to emphasise, however, is that the Eugenist is not concerned with actual qualities but with the seed of which these qualities are the expression. It is the good seed which he desires to select, and the bad seed which he wishes to reject.

Coming now to the question of Constructive Eugenics, it is obvious that the chief instruments must be the force of public opinion and the education of the people regarding their duty to posterity. It is not every person who knows anything about his ancestry, but there are thousands of persons who do, and who know that they are the descendants of sound, healthy stock. It is little short of high treason for these persons to deliberately refrain, as so many of them are doing, from the propagation of their kind. But they must take care that their partners are equally sound. There is no more precious heritage than that of "fitness," and no possession more worthy of being passed on unsullied to another generation. With regard to the fit amongst the working classes, it has to be admitted that the coat is often limited by the cloth available—that the means do not admit of more than a small family. It should be the duty of the state to redress this grievance, and to encourage, not discourage, their propagation. I believe that if a tithe of the money which now goes to support the unfit members of the community were directed towards the encouragement and betterment of the fit, one great cause of impending national disaster would be removed.

There is another present-day condition tending to restrict the propagation of the fit to which I must allude. It is far from my desire to enter into any discussion as to the rights or wrongs of woman suffrage, but it is impossible to avoid seeing that a great change has taken place in the ideals of many of the most capable and most fit women of the present time. From the biological aspect, which in my opinion is the fundamental one, and the only one with which I am concerned, the chief mission

of woman is unquestionably the bearing and rearing of children. When we remember that the children of to-day will be the citizens of to-morrow, it is difficult to imagine any more noble or important function, and I believe that no little of the past greatness of this country has been due to the manner in which the women of Britain have discharged this duty. But it cannot be denied that the subject of motherhood is now-a-days in danger of occupying a second place. A generation has arisen which is more concerned with the management of the affairs of the parish, of the municipality, and of the nation, than with those of the home. There has not only been a serious decline in the marriage-rate of capable and educated women, but those who do marry do so at a later age, and then often with the proviso that there shall be no encumbrances. I do not say that the blame rests entirely upon woman; it is probable that man also is getting slack in the discharge of his duties, and is more inclined to spend his income upon pleasure than upon the maintenance of a family; but the net result is to bring about a most serious decline in the birth-rate of the fit members of the community. It is a significant fact that the decay of Rome and Greece was preceded by a bewailing of the dearth of children amongst the best and noblest families.

With regard to Restrictive Eugenics, the indications are much clearer. I do not say that we can point to every variety of mankind whose propagation should be prevented. This we certainly cannot do. There are, however, some types whose connection with germinal impairment has been clearly established, who are born unfit, and who will certainly transmit their unfitness to posterity; and it is the restriction of the propagation of these which must, I think, be the first aim of the Eugenist. Many chronic paupers and unemployables, many habitual criminals and inebriates, many varieties of the insane come within this category; but the most glaring example of all is that of the Feeble-minded. There is no need to go into particulars regarding these persons; they have been most fully placed before the country by the recent Royal Commission on this subject; it is only necessary to say that these morally weak, irresponsible and degenerate individuals are propagating by leaps and bounds,

that this propagation is having a most serious effect upon the aggregate vigour and character of the nation, and that it can only be checked by legislation on Eugenic principles.

In my opinion the time is now ripe for restrictive legislation in regard to these classes; indeed I would go further, I would say that the time has come when the whole assemblage of the fit of the nation, whatever their political creed, should unite in demanding that this incubus, this old man of the sea, should be lifted off their backs. Almost each Parliamentary Session sees the birth of some social reform, each year some extra money burden is placed upon the community. Some of these reforms are good, some of this money is well spent; but many legislative enactments and much of this increasing taxation are solely and simply due to the presence of an increased number of citizens who, by reason of hereditary impairment, fall short of the average standard of intellectual and physical vigour. I unhesitatingly affirm that if these measures of social reform are not accompanied by others to prevent the alarming multiplication of the unfit which is now going on, the end will be National Disaster.

Progress in the future must be based upon the fundamental principles which have governed it in the past, namely, the selection of the fit and the rejection of the unfit; but, to quote the Psalmist of old, "An unwise man doth not well consider this and a fool doth not understand it."