

ON THE SURVIVAL OF THE UNFIT

Forum Medical Series — V

LEONARD DARWIN

IS the human race deteriorating? Major Leonard Darwin, son of the great Evolutionist, is far too cautious a scientist to assert definitely that any such deterioration is taking place. But he does believe that all signs point in one direction, and that new discoveries may be expected to confirm the signs already so alarming. Any change for the worse in the general human average will be insidious because it will be so slow. The remedy lies in the scientific application of eugenic principles.

TO raise the average qualities of mankind in the future either by relatively increasing the number of individuals of superior types, or by decreasing those endowed with inferior natural qualities, — this is the aim of eugenics. The hope that social progress may thus be promoted is generally held to be an outcome of modern biological theories, and therefore to be a quite novel aspiration. In my opinion, however, eugenics is, or ought to be, founded on common sense quite as much as on scientific generalizations; and as our generation can not, to say the least, claim a monopoly of common sense, it is not really surprising to find that eugenic proposals have occasionally been made from time immemorial.

The following passage from the Greek poet, Theognis, written some twenty-five hundred years ago, is quoted in many books on this subject: "We look for rams, asses, and horses of good stock and we believe that good will come from good; yet a good man does not fear to wed the daughter of an evil father if he do but give her much wealth. . . . Marvel not that the stock of our nation is tarnished." Plato's wild schemes, to which the term "stock-yard methods" may not unfitly be applied, are also well known. It will only be when persistent and systematic attempts are made to promote racial progress by schemes consistent with both science and common sense that we shall be able to claim that we are entering on new ground.

No doubt the words "science" and "common sense" have often had somewhat different meanings attached to them, and it may be as well, therefore, to state what they are intended by me to cover. Science is here used to indicate the study of all the links

which bind together all the events occurring in this universe of ours, in so far as known to us through our senses. It is true that underlying assumptions may have to be made both as to the real nature of these links and as to the validity of our knowledge concerning them; but here we pass out of science into philosophy. Science is, in fact, a systematic coordination of individual experiences concerning external objects; and the laws concerning the sequences of events, which may thus be formulated, are of incalculable value in enabling us to foretell future events, or consequences, from a knowledge of present facts. Then as to "common sense", or rather, as to such of our judgments as can thus be labeled, do not they also depend on the best possible use's being made of available human experiences? If so, science and common sense do not differ in origin as much as is popularly supposed, and both ought always to point in the same direction.

Why, then, does the man in the street not seldom find himself at variance with the man of science? For this state of things both sides are to blame. As to those who rely almost exclusively on common sense and who do not give themselves the trouble necessary for the understanding of the arguments on which scientific conclusions are based, they are apt to declare roundly that no attention need be paid to such conclusions. For example, we all know that care in feeding and training make a visible effect on a horse; we know that visible qualities are apt to run in families, that is to say, to be inherited; and unaided common sense generally leads men to jump to the conclusion that both the feeding and training of a race-horse must actually improve the breed of its progeny. But when we begin to study what science has to say on this subject, our faith in this conclusion is soon rudely shaken. No doubt the question of the inheritance of acquired characters, as it is called, is still not quite settled; but if we follow the opinion of the majority of scientific experts on this difficult problem, we shall be led to place no reliance, to quote another example, on the education given to the children of this generation as a means of making the children of the future more easily educable. We must educate our children for their own sake only; and as to possible benefits to future generations, we must rely largely on the dictates of science.

But men of science must not pride themselves on being free from

error. In their own often very narrow fields of study their conclusions should carry great weight; but they themselves often fail to realize that, outside those fields, they also are trusting largely to their common sense, whilst not seldom claiming for the opinions they hold the infallibility of scientific truths. Scientific workers are apt, moreover, to pay too little attention to traditional warnings passed on from generation to generation; warnings which are often the crystallized experiences of wise men in many past ages. As an example of the kind of errors here alluded to, a small book by Mr. J. B. S. Haldane, entitled *Daedalus*, may be quoted. He suggests that in the future, by means of a surgical operation and what may be described as a superincubator, women will become the mothers (biologically speaking) of perhaps a couple of hundred children each, whilst the fertility of men will be almost indefinitely enlarged. The powers of selective breeding will thus be immensely increased, and racial progress proportionately promoted. Is this a joke? I do not know. But I am certain that there is a serious defect as regards either a sense of humor or common sense, — either on my part or on the part of Mr. Haldane.

Another little book which I can not but feel would have been improved by a dose of common sense is *Prometheus* by Professor H. S. Jennings. He discusses the relative importance of heredity and environment, a topic on which much confusion of thought has been displayed on all sides, and a question which should generally be answered by saying that both are of vast importance. Rousseau and his school tried to prove that environment counted for everything, and their influence was still strongly felt when my father began his studies on the problem of organic evolution. In those studies, the evidence of men of common sense was certainly not neglected. He held that "it is hardly possible, within a moderate compass, to impress on the mind of those who have not attended to the subject, the full conviction of the force of inheritance which is slowly acquired by rearing animals, by studying the many treatises which have been published on the various domestic animals, and by conversing with breeders." (*Animals and Plants under Domestication*, Darwin, I, pp. 447-448) Is the truth with regard to the "force of inheritance" even yet sufficiently realized? I much doubt it.

The object of *Prometheus* is, I suppose, to point out that in the

author's opinion commonly at present "heredity is stressed as all-powerful, environment as almost powerless." (pp. 65-66) Here I like to imagine the professor pursuing his inquiries as to the relative importance of these two factors by consulting a trainer of race-horses, and here is the way in which I believe that such a conversation might run. The trainer might reply, "I don't know what you are driving at. I can't win a race either with a well trained, well fed, but underbred hack or with a thoroughbred horse out of condition. It is mere nonsense to ask which is more likely to win." Then the professor would perhaps intervene by inquiring whether owners had not often been heard to declare that breed alone tells. "In what stables do they talk rot like that? I don't waste my time over silly talk. I am out to win races." In this connection I can not but express the wish that Professor Jennings had given even a single quotation so as to indicate the kind of men who overvalue heredity and whether they are worth the powder and shot of a reply.

I must also confess to the wish, perhaps an unwise one, that here in England we had a few amongst our social reformers who thus regarded these questions in order that in some slight degree they might counterbalance the great majority who never think about heredity even for a moment. If this brilliant author would write another little book as attractive as *Prometheus*, stating only his own views, both as to the evidence in favor of the probability of immediate though slow racial deterioration and as to the ways in which beneficial racial effects, to use his own words, "could be produced by operating on statistical principles," — if he would do this, he would partially obliterate the harmful and erroneous impression he has created as to his own views. For I can not believe what many have been led to believe, namely, that he holds it to be practically useless to pay any attention whatever to heredity in human affairs.

Common sense has to intervene in this controversy in yet another way. In such matters science concerns herself primarily with ascertaining what would be the direct effects if certain steps were actually to be taken, whilst common sense must weigh in the balance all the indirect consequences. Common sense can not neglect the harm likely to result from the stirring up of human prejudices and passions, and for this reason even truly beneficial

reforms should rarely be adopted if condemned by a majority of the people, because of the harmful reaction generally thus produced. For example, sterilization can be conclusively proved by science to be capable of producing vast benefits to the race, but is, nevertheless, a reform to be advocated with the greatest caution. Common sense must be content at present with nothing but spade work in some parts of the eugenic field.

As has already been said, eugenics aims at the obliteration of the harm done by the survival of the unfit, or more correctly by the production of offspring by the innately inferior. This harmful influence to posterity is due to passing the inferiority of the parents on to their descendants, not only by natural inheritance, but also by social contagion within the family circle. As to those who regard heredity as a negligible factor, must not they hold that the differences between human beings are almost exclusively due to differences in their past surroundings? For to what else could they attribute such differences? Now, all inferior types must in some degree show their inferiority by creating for themselves inferior surroundings in their homes; and, if so, these advocates of the exclusive effects of environment ought to agree that any inferiority in the home of to-day must be passed on in some measure by social contagion to the coming generations. Surely then, they ought to be ready to join hands with eugenists in their efforts to lessen the number of children issuing from inferior homes, provided that this can be done without injurious moral consequences. Common sense indicates that this is a direction in which all should cooperate.

If we turn to the other method by which injurious qualities are transmitted to posterity, namely, by natural inheritance, the dictates of common sense certainly reinforce the scientific investigations which indicate both that men are not all born alike and that the inborn differences between them are capable of being inherited. For example, when we look back on our school days, all of us must admit that amongst our playmates there were some who excelled us in each of our qualities, a superiority not to be explained away by any superiority in our rivals' former surroundings. We know that we were not their equals by nature. Another but more complex proof of the same conclusion can be based on the great similarity often existing between twins. In the

case of so called identical twins, who remain very much like each other even in old age, it is obvious that any differences in their past surroundings had produced very little observable differences between them. But brothers who are not twins are normally not exposed to much greater differences in surroundings, and we are, therefore, justified in assuming that any marked differences between them must be due to some cause other than difference in past surroundings, that is to say, due to differences in their natural endowments. This point is no doubt puzzling, but a common sense examination of this question, if carefully pursued, will indicate that the differences between brothers who are not twins gives a fairly correct indication of the differences which natural inheritance may make, even in one family.

If it be agreed that efforts ought to be made to keep the population of a country up at least to a certain standard of excellence, many difficult practical problems have to be faced. The most important of these fall under two heads, the immigration problem, — or how to prevent the unfit from entering the country, — and the birth rate problem, — or how to prevent them from entering the world. In the United States at the present time the immigration problem is one of vital importance, and steps are rightly being taken to insure that none are admitted who would be likely to lower the racial qualities of the American stock. In this connection, does not common sense demand that those who are selected to become your fellow citizens should be such as would be as quickly as possible Americanized? If so it would seem wise to give some preference to those who can speak your language, more especially if by so doing you should also be helping to maintain the qualities and characteristics of your people up to their present level.

There is, however, one point in connection with immigration in regard to which common sense may be somewhat blind, — the reason being that common sense is intensely national. What is one man's meat is another man's poison; and if it is meat to the United States to take nothing but excellent stock from England, it is something like poison to the old country to have to retain only such refuse as is held not to be good enough for admission within your borders. I raise no complaint, however, for I am most anxious that my country should take a leaf from your book and make

our immigration laws equally severe. If another country tries to dump bad food on us, we do not feel compelled to eat it; for we hold that it is the duty of the exporting country to prevent the production of any such inferior produce. In like manner it should be regarded as the duty of every country as far as possible to lessen the output of inferior human stocks within its own borders. Considerations such as these indicate what common sense may fail to appreciate, namely that strict immigration laws, though nationally beneficial, produce no direct beneficial effects whatever on mankind as a whole. World-wide progress can only be accomplished by all nations' taking thought as to such eugenic reforms as are dependent on changes in the birth rates of the different human types.

The vast territories of the United States are becoming more and more thickly populated, the number of immigrants has, in consequence, already been restricted, and before long the type of citizen being absorbed into your ranks, though still well worth considering, will have become quite a minor factor in determining whether your people are progressing or deteriorating in racial qualities. Even now you do not know what is happening in this respect. To safeguard yourself for the future, the far more difficult and important problem of eugenic reform from within ought to be tackled. And as the United States is destined to play a great part in the history of the civilized world, what that history is going to be will depend in no small measure on what steps in this direction are taken in America. And any delay in taking these steps will only increase your difficulties.

These internal eugenic reforms have for their object the prevention of inferior stocks from multiplying more quickly than the superior; and as the lethal chamber, — or more simply, murder, — is out of the question, what is needed can only be accomplished through the agency of the birth rate. We know that certain classes, the feeble-in-mind for example, would have an exceptionally high birth rate if left uncontrolled, and we know that such ailments are normally highly hereditary. Obviously, the right method of safeguarding posterity in regard to this unfortunate class is to segregate them, that is to maintain them in comfort with the sexes kept apart. Sterilization should, in my opinion, be adopted as an alternative when liberty, partial or

complete, can be advantageously permitted with the aid of this precaution. Other types of the grossly unfit should also be segregated, but only in so far as this is just and practicable.

No single student of these problems known to me has any doubt whatever as to the great advantages to mankind which would result from the prevention of parenthood by the unfit; the difficulty lies in persuading the general public of this fact. No doubt if we eugenists could confidently proclaim that mental defect is rapidly becoming more prevalent, that insanity is increasing by leaps and bounds, that the increase of crime conclusively proves the steady deterioration of the race in moral qualities, and that the cost of maintaining the unfit will, in the next generation, throw a quite intolerable burden on the people, — if we could paint a lurid picture of this sort, our path would be made easy. The certification of all classes of mental defectives now, however, often depends on the accommodation available, and an increase of accommodation has resulted in an increase in the numbers certified.

Medical science has increased the duration of life, and as insanity is a disease which is more prevalent late in life, its incidence has inevitably thus been increased. Crime has been more indulgently treated and may have increased in consequence. All that the eugenist can say is that the facts known to us are consistent with the belief in a slow and steady progressive deterioration of the average qualities of the people, but not with the view that such a deterioration has actually been demonstrated. But good reasons do exist, in my opinion, for believing that such a slow, insidious change for the worse is either now in operation or will be so shortly, — the great danger of the situation depending on the fact that it is, or will be, taking place so slowly that the change is not to be perceived.

If floating in a boat on a wide river like the Amazon, with the banks on both sides out of sight, no one could tell whether the tide was slowly drifting him upstream or down. In like manner we do not know for certain if we are drifting backward or forward, as regards the inborn qualities of the people. Moreover, we do not realize how heavy is the burden which the inferior types are even now throwing on the superior in a hundred different ways. We accept our troubles as inevitable, and future generations are

likely to continue to accept them in the same passive way. Safety can only be sought in the destruction of ignorance.

Unfortunately, the more these racial problems are studied the more difficult does it become to demonstrate all the dangers with which we are faced. For instance, we might stamp out all the forms of gross unfitness above mentioned and, though this would be an immense gain, it might not prevent an invisible progressive increase in other forms of mental inferiority; these including stupidity, laziness, bad temper, dishonesty, want of forethought, incapacity to work with others, and so forth. Now these are the qualities which tend to keep a man in the lower ranks of labor, that is to say in those ranks in which the birth rate is normally at the highest. And if these lower ranks are multiplying more rapidly than are the higher grades, including highly skilled artisans of all kinds, this affords strong presumptive evidence that these bad qualities are becoming more prevalent. This is the form of racial deterioration most to be dreaded because least easily detected.

As to the many methods of endeavoring to prevent any such racial tragedy, space forbids me from entering on this topic. Indeed a recent experience has taught me that I should want at least five hundred and twenty-three pages to deal with these problems at all adequately! (*The Need for Eugenic Reform*, Appleton, 1926, pp. 523) All that I here want to urge is that neither science nor legislation nor common sense could succeed single-handed in this field of reform. Scientists are as disinclined as any one else to promote innovations, except in their own special fields of inquiry. Politicians concentrate their thoughts on votes, and posterity has no voting power. Common sense can not act alone, because of a lack of knowledge; though we must rely on it in order to give the necessary driving power.

All intelligent men should combine in an endeavor to promote the adoption of such measures as would affect the birth rates of the different human types in such a manner as to safeguard the race. For this purpose, more knowledge should be acquired, although enough does now exist to justify an advance in many directions. Changes in social customs should be promoted, and this would necessitate both a moral and an educational campaign. Lastly, economic arrangements tending to check or to encourage parenthood, as may be needed, should be introduced. My confi-

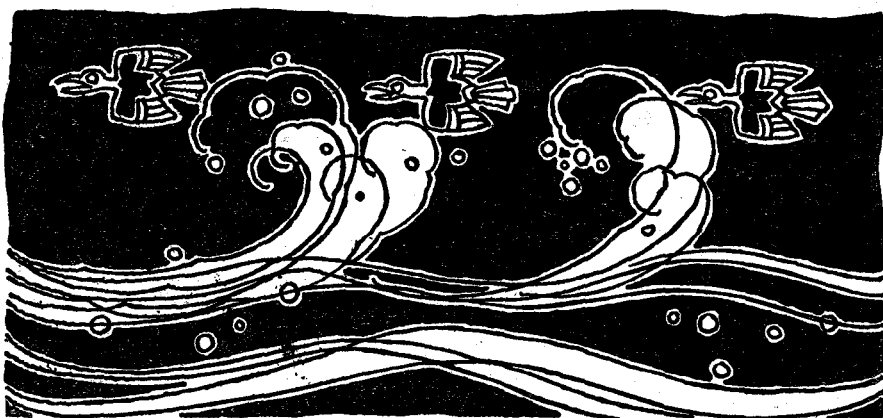
dent opinion is that by such means it would be possible to turn a slow racial decay, leading to an inevitable catastrophe to our civilization, into national progress without assignable limits. Will common sense not insist on a full inquiry into this whole problem, together with all the necessary reforms, if the views here merely sketched in outline should be sustained?

One cause of grievous damage to the race has yet to be mentioned, — War. England lost 46,000 officers and 908,000 of other ranks in the Great War, all being more or less picked men. The loss amongst the young officers was proportionately the greatest. The story is of course just the same with you. If these brave men are now looking down on us, what kind of monument are they wishing to see erected in their honor?

Will not their main desire be that the memory, both of themselves and of their deeds, now so deeply cut into our hearts, shall in some measure be passed on forever into the minds of the men and women of the nation for which they died? The ancient deeds of other nations interest us but little; and, for such a living memorial to be both strong and permanent, our civilization must not be allowed to decay. To prevent such a decay science and common sense must see to it that the gaps made by deaths in the Great War are filled up by material no less sound and noble. An ever-warm appreciation in the hearts of their fellow countrymen, even in the distant future, and still more the enduring fame of the lands they loved and died for, — this is what I can not but believe these departed spirits would wish for, and not merely their names carved in marble, much as we value these records of the departed.



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Drawings by Johan Bull

WHALES AGROUND!

A True Tale from the Faroe Islands

ELIZABETH TAYLOR

Can He provide flesh for His people?

Psalm LXXVIII, v. 20

AFTER an enforced sojourn of sixteen days on the top of an outlying island, "weather fast" by great surf, I have come, at last, to my desired haven, — the home and the garden of Hans Kristoffer à Ryggi. Haymaking, long delayed by storms, is in full swing. Hans Kristoffer, his brother, Elder Jegvan, Younger Jegvan, and Heine mow the grass, and six maids spread and toss it with their hands. My pleasant part it is to sit on a grassy hillock and watch the others. I need a little time of repose after my adventures on "difficult" islands. Every night, in dreams, I fell off those dizzy heights to thundering depths below, so now my weary eyes rest gratefully on peaceful fields where Arctic terns, like giant swallows, dart to and fro over the fragrant grasses. The sea is quiet, except at times when some larger wave meets the strand with a long-drawn sigh; and the distant islands gleam like jewels through opalescent mists that wander in from the lonely sea-wastes of the Northern Sixties. This is the so called "Grind-weather", when *Grinds* or flocks of pilot whales like to visit the Faroe group, for reasons that no one understands.