THE EUGENIC FIELD

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I HAVE been asked to make for this REVIEW a short survey of the Eugenic field—a request by no means easy to comply with in a single paper. The study of Eugenics has made such progress during the last two or three years that a great many persons are at least as well acquainted with its main features as I can pretend to be, although I first wrote upon it more than thirty years ago. To these a "short survey" will not commend itself; they will crave for more solid nourishment. There are, on the other hand, undoubtedly some to whom the very word "Eugenics" is still new, and who, when they hear it pronounced, prick up their ears and welcome it as coldly as a Tariff Reformer does a bale of free imports dumped down here from a foreign land. Obviously for such persons lighter refreshment must be provided or they will "vote the whole thing a bore."

Placed as I am between Scylla and Charybdis, I shall steer the proverbial middle-course, and endeavour to conciliate and interest the novices, without sending empty away those who are better informed. Jotting down such thoughts as occur to me, I shall freely avail myself of the labours of others, and, if need be, reproduce a portion of what I have written elsewhere.

I. *General Retrospect.* Almost as soon as man acquired by his higher intelligence mastery over the lower animals, he discovered that he could increase their usefulness by what is called "breeding for points." He found that he could thus add to the swiftness of the horse, to the strength of the ox, to the sagacity of the dog, to the sharp-sightedness of the falcon. The owner of the modern racing stable, the fowl and pigeon fancier, the raiser of agricultural stock, are all to-day pursuing the path opened up to them by primitive man. Just as there were brave warriors before Agamemnon, so there were "Race-Improvers" before

Francis Galton. Theognis of Megara, who lived in the sixth century before our era, was a very early Race-Improver. He might almost have made a contribution to this REVIEW; only it would have been in verse, not in prose. For Theognis was a poet, and more, he was an idealist—which not all so-called poets are, some being only versifiers. Of course, too, he was a Greek, for were not the ancient Greeks great idealists, ever young, ever lovers of strength and beauty both of mind and form? All we have of him is a few fragments; the rest of his poems have perished. But these fragments enshrine a thought which is as fresh now as when it first took shape, and is peculiarly applicable to the ways of modern society. Here are some lines addressed to his friend Kurnus, done into English by John Hookham Frere, the accomplished translator of Aristophanes:

> "With kine and horses, Kurnus, we proceed
> By reasonable rules, and choose a breed,
> For profit and increase at any price,
> Of a sound stock without defect or vice.
> But in the daily matches that we make
> The price is everything: for money's sake
> Men marry, women are in marriage given.
> The churl or ruffian that in wealth has thriven
> May match his offspring with the proudest race—
> Thus everything is mix'd, noble and base.
> If then in outward manner, form, and mind,
> You find us a degraded, motley kind,
> Wonder no more, my friend! the cause is plain,
> And to lament the consequence is vain."

No wonder Charles Darwin inserted this quotation in an early chapter of his *Descent of Man*. An idealist—I had almost said a Eugenist—was speaking athwart the ages to an Evolutionist. In his later life Darwin regretted that he had almost completely lost his taste for poetry. But his power of imagination he never lost, for without imagination he would never have left behind him so many ardent disciples. And we may be sure that he never lost his taste for that profound bit of Theognis.

The Greek who first seriously advocated Race-Betterment was, of course, the Athenian philosopher Plato, whose literary activity covered the first half of the fourth century B.C.

Plato was a thorough Eugenist "on paper" — or whatever writing material he employed. But his methods were impracticable. Putting his own words into the mouth of his master Socrates, he lays down in the fifth book of the *Republic*, as a cardinal principle of his ideal State, that courage and beauty should be united—that the brave only should wed the fair, only the fair the brave—that no marriages should be allowed but those in which this distribution of natural advantages was secured. Marriage was to be in all cases regulated by the State, and solemnised, not at the sweet will of the parties or at times chosen by themselves but only at State-appointed seasons, and not singly but in batches. Bridegrooms and brides were to be mated by lot, and the lots were to be so manipulated by State-officials as to bring together superior persons of each sex, and to keep apart the inferior, who were to mate with each other. The offspring of the first set of unions were to be regarded as "children of the State," for the State was not only to be their foster-parent, but to replace for all purposes their actual parent. The offspring of the second set of unions, in which inferior mated with inferior, were to be put away and no more heard of. Thus, individual parenthood and individual family life were to be completely effaced, nor was any room left for pity or the succour of the weak by the strong.

Such a system, viewed in the light of modern civilisation, is a manifest and cruel absurdity. Indeed, it is doubtful whether Plato himself believed in it, for when he, or rather Socrates whom he was impersonating, was asked whether the system was feasible, the answer came in this nebulous form:

> "Until philosophers are kings or the kings and princes of this world have the spirit and power of philosophy, and political greatness and wisdom meet in one, and those commoner natures who pursue either to the exclusion of the other are compelled to stand aside, cities will never have rest from their evils—no, nor the human race, as I believe—and then only will this our State have a possibility of life and behold the light of day."

That Plato should have relegated to the Greek Calends the realisation of his own ideas is not surprising. What is surprising is, that his wide-minded, scholarly interpreter should have "gone one better" than Plato. Writing in 1875, Dr. Jowett says:

"We know how human nature may be degraded; we do not know how by artificial means any improvement in the breed can be effected." Why, this is precisely the problem which modern Eugenics has set itself to grapple with, towards the solution of which it had considerably advanced before 1875, and in which it has since made still more rapid progress.

Francis Galton, whose Prefatory Note to this REVIEW supplies its foremost word, has been called the Founder of latter-day Eugenics, but, in strictness, there can be no founder of any science—there can only be workers at it. Of these workers one or two may become more prominent than the rest, and entitled to a larger share of the credit awarded to a new discovery. But this is the highest point that can be reached, for the filiation of ideas is an endless chain. If Darwin had never read *Malthus on Population* (1798), would, it may fairly be asked, the *Origin of Species* (1859) have ever been written? And if Galton had never read the *Origin of Species*, should we have had from his pen *Hereditary Genius* (1869), or *Inquiries into Human Faculty* (1884)?

To these questions authoritative answers have been already furnished, for both Darwin and Galton have publicly acknowledged their great indebtedness to their immediate predecessors, and it is highly probable that Malthus would have done the same had the like question been put to him. By way of illustration, let us recall the famous controversy as to the priority of the claims of Newton and Leibnitz to the discovery of the Infinitesimal Calculus. The controversy is famous, but it was futile, for the discovery of the Calculus was the work of time. Like Topsy, it was not born—it grew. Newton, for his Method of Fluxions, owed much to Barrow, his predecessor in the Lucasian chair of Mathematics at Cambridge; and Leibnitz, for his Method of Differences, owed much to Pierre de Fermat of Toulouse. The Calculus was already "in the air" before either Newton or Leibnitz wrote. Each of these great men helped to bring it down from air to earth, and this they did by pushing its principles home and rendering it intelligible to the scientific world.

This is precisely what Galton has done with regard to

Eugenics. He it is that invented the term and first boldly proclaimed the profound thought that "men may be the chief and perhaps only executives on earth—that although our instructions are obscure they are sufficiently clear to justify our interference with the pitiless course of Nature, and to attain by gentler and kindlier ways the goal towards which Nature moves." He, too, it is that first set on foot the scientific methods of measurement and calculation, now being elaborated by Prof. Karl Pearson and by him applied to Biometry. To Galton we owe the "Eugenics Laboratory," which, organised in consultation with the authorities of the University of London, bids fair to grow into an important centre of research. Call him the "Founder of Eugenics" we may, but let us remember that he is much more. By his persistent endeavours to influence public opinion on the subject, and by his persuasive promulgation of its principles, he is entitled not only to be called the Founder, but also the chief Apostle of Eugenics.

II. *Heredity.* What makes the science of Eugenics possible is not that "like begets like," as the popular saying is, but that there are laws of heredity. Like does not always beget like. It is common experience that superior persons often produce inferior children, and that inferior persons—though less often—produce superior children. Is there, then, no law of heredity at all? That depends on what we mean by a law. Do we mean that a law always operates whatever the obstacle in its way? Certainly we do not. Take the law of Gravitation. If a ball is thrown into the air it may, or may not, fall to the ground. It may lodge on a roof or a tree, or, if electrically charged, it may be attracted and held by another body in space charged with electricity of the opposite sign. All we can say of gravitation is that it has a *tendency to act*, and this is all we do say of heredity. To put the matter a little differently, Eugenics deals with *averages* rather than with individual cases. *In the average* the law of heredity acts with practical certainty; and all race questions are questions of average.

1. *Alcoholism.* In one of the editorial notes printed in an earlier page some striking examples are given of the inheritance of deaf-mutism. Let me here give some examples of the

inheritance of "alcoholism." Dr. Sullivan, a high medical authority, affirms that in many of the defective nervous developments of humanity parental alcoholism exercises "a causal influence" on offspring. In epilepsy, such influence has been noted by one careful observer in 21 per cent. of the cases, by another in 28 per cent., by a third in 20·2 per cent. In idiocy, it has been traced to the father in 471 cases, to the mother in 84 cases, and to both parents in 65 cases out of 1,000. In 150 idiots and imbeciles whose family history was investigated by Dr. Tredgold, the well-known mental pathologist, it was found present in 46·5 per cent. of the cases, usually in association with insanity or other neuropathic conditions. In prostitutes, it has been found in 82 per cent., and in juvenile criminals of weak intellect in 42 per cent.[1]

Can any pulpit teaching, can any temperance advocacy, come up to the eloquence of these figures? Do they not raise quite apart from all considerations of personal morality, this extremely important question: Given a man or woman of intemperate habit, what will be the effect on the possible children if he or she marries? Is there any risk of a predisposition to drink being communicated to the next generation? The answer is plain. There is such a risk and the risk is proportional to the degree in which the alcohol has become an indispensable factor of the daily life of the parent. If it has been allowed to penetrate so deeply as to affect the germ cells as well as the somatic cells of the parent, then it is almost certain that the children will be affected also. There will be transmitted to them a constitutional weakness, which will sooner or later express itself in some form of degeneracy, although in what particular form we may be unable to predict. For alcohol may, by its continued use, work like a poison in the system even when it is not a poison to start with.

One of the most eminent of our Metropolitan Police Magistrates, Mr. Cecil Chapman, is reported to have said not so long ago: "Inebriety is a disease and should be treated scientifically. Hence, the question whether a man or woman is habitually inebriate should be settled by a competent tribunal with proper

[1] *Sullivan on Alcoholism* (James Nisbet & Co., 1906).

medical examination." In this all Eugenists will concur, and many of them will be disposed to add that not until such persons can show a clean bill of health should they be allowed to propagate their kind under the sanction of either the law or the Church. The recent Report of the Departmental Committee on Inebriates is, by reason of its silence on this point, distinctly disappointing; it does not go so far as the evidence would warrant.

2. *Feeble-mindedness.* The Report of 1907 of the Royal Commission on the Feeble-minded is so well known and so accessible that we need not stay to consider it now. The conclusion arrived at by the Commissioners is (1) that "there is the highest degree of probability that Feeble-mindedness is usually spontaneous in origin, that is, not due to influence acting on the parents; (2) that it tends strongly to be inherited." The latter statement is enough for our present purpose, but, to prevent misunderstanding, a word or two must be said about the former.

One of the Commissioners was good enough to give us in the *Times* last autumn an explanation of its meaning. "By origin," he says, "we mean the first occurrence of feeble-mindedness in a line of individuals. By 'spontaneous' we mean that such first occurrence is usually due, not to influence such as disease or hardship acting on the progenitor of the afflicted person, but to a peculiarity which arises in him as spontaneously as an extra finger or toe when it appears for the first time in a line of individuals. . . . When once the peculiarity has appeared it tends strongly to be inherited."

I ventured to observe by way of reply to this explanation when it first appeared that no one can say when any mental characteristic, whether marking the advent of a genius or an imbecile, "first occurs in a line of individuals," seeing that germinal differences (to which biologists are in the habit of attributing inborn mental characteristics) may be latent for several generations, and that we must, therefore, by "first occurs" understand "is first noticed." Thus annotated—I do not say amended—the conclusion of the Commissioners is clear, and we see that "spontaneous feeble-mindedness" (so-called) may arise either from germinal or from environmental causes at

present beyond our ken. The inquiry into the inheritance of feeble-mindedness is, therefore, not closed; it stands adjourned.

3. *Hereditable Diseases.*—With regard to these diseases I adopt the view put forward by Dr. Arthur Thomson in his work on "Heredity." When it is said that a given disease is heritable, it must be borne in mind that disease is not a material thing but a process which runs its course in some part of the body. Now, we cannot speak correctly of the transference of a process as we can of the transference of heat or light. What is transmitted in disease is not the disease itself but a susceptibility to it, and the transmission is effected through the medium of the germ cells. Gout, for instance, is not heritable as such, but a predisposition to gout is, and this predisposition, when transmitted, may manifest itself in the second or third generation, skipping over the first. The same holds good of hereditary diseases generally.

Non-hereditary diseases are induced by modification of the somatic cells due to unnatural habits or surroundings. To this class belong "diseases of occupation." For example, what is known as Collier's Lung (a non-tuberculous disease caused by the in-breathing of very fine coal dust and lamp-smoke) is a disease of occupation. It occurs among successive generations of colliers, but being in each case induced by a special environment cannot be properly classed as "heritable."

Pulmonary consumption (tuberculosis) is caused by the destructive lesions set up in the lungs or other part of the body by a special microbe called the tubercle bacillus. It is communicable from man to man, and from animals to man. It never originates in the body apart from the invasion of the bacillus named. So far the authorities agree, but whether consumption should be classed as heritable is a point on which they differ. It is no doubt popularly regarded as heritable, but recent investigation rather points the other way. No one doubts that tuberculosis may—though this is a very rare occurrence—be directly transmitted from mother to child during the intra-uterine life of the latter. But this is not what we mean by inheritance. An attack on the individual fœtus made by a microbe through the placental tissues is still an *outside* attack, although the individual is not yet born. Dr. Thomson

has satisfied himself that pulmonary consumption is not inherited as such. "What," he says, "is inherited is a pre-disposition to caseous degeneration of tissues and allied pathological processes." If this is so, tuberculosis must lie very near the line between heritable and non-heritable diseases. Prof. Karl Pearson, who has made a careful "preliminary study" of the statistics of consumptives is fairly confident that "for the artisan class the inheritance factor is far more important than the infection factor," using, of course, inheritance in its strict sense. Prof. Koch, of Berlin, perhaps the greatest living bacteriologist, arrived in 1901 at the more comfortable conclusion that although hereditary tuberculosis is not absolutely non-existent it is nevertheless extremely rare, and that we are at liberty in considering our practical measures to leave this form of origination entirely out of account. Here, as in the case of the feeble-minded, we await the results of further enquiry.[1]

It would be cowardly, it would be discreditable, not to allude here to another disease unquestionably heritable and much more far-reaching and disastrous in its effects than tuberculosis. There is no greater cause of national deterioration than this terrible disease, with regard to the very name of which there is a conspiracy of silence. Its scientific name is syphilis. Now there is at the present moment some uneasiness openly expressed as to whether the Territorial Forces will ever be brought up without conscription to their prescribed number; there is none expressed as to the health and physical soundness of our Regular Forces. Yet what are the facts as disclosed by the Annual Reports of the Surgeons-General of the British Army and Navy? I take from Dr. Rentoul's *Race Culture* the statistics of 1901; they are sufficiently recent for our purpose. In that year, of 100,811 Army troops stationed in the United Kingdom there were 10,625 admissions to hospital for this malady, in one or other of its forms. Of the British Army in India, out of 60,838 troops there were 16,789 admissions for the like cause. Of European troops in other parts of the Empire, there were 6,243 admissions for the like cause. In the Royal Navy, with 98,940 men afloat, there were 11,193 admissions. "We know," says

[1] See Dr. Newsholme's *Prevention of Tuberculosis*, Methuen, 1908.

Dr. Rentoul, "that very few of these men are really cured, and that they come home and spread the disease broadcast." This is true, not of Great Britain only but of other great countries as well. No wonder that a contemporary French writer says: "syphilis is the essential murderer of the young in years; it is the veritable tomb of infants; it is the cause of death before birth, at the moment of birth, after birth, within the first week or the first year of birth."

To the striking facts here set forth many timid persons shut their eyes, after wiping away a foolish tear over the declining birth-rate. They prefer not to see; but it is the duty of Eugenics to insist that they shall see and brace themselves to seek the remedy. Dr. Rentoul has some excellent suggestions to make. He would follow the legislation of the State of Michigan, and make it illegal for anyone to marry who is suffering from the disease in question. He would also make it a criminal offence knowingly and wilfully (in the legal meaning of those words) to communicate this disease to another. For such legislation, he points out, we have a precedent in the Contagious Diseases (Animals) Act, 1878, which provides that "every person having in his possession or in his charge an animal affected with disease shall, as far as practicable, keep that animal separate from animals not so affected." Surely the life of a man, a woman or a child is worth more than the life of a sheep, a cow or a dog?

III. *Positive Eugenics.* Hitherto we have been concerned only with that province of Eugenics which teaches us what to prevent. It remains to speak of that other province which teaches us what to encourage. In other words, we must now pass from Negative to Positive Eugenics.

It is as important that the right people should be born as that the wrong people should not be born. By the "right people" I mean not those who, in Herbert Spencer's phrase, are the "fittest to survive," but those who give most promise of "civic worth," that is to say, will be most likely to be at once useful to themselves in the way of enjoyment and self-support, and also useful to the community at large. Sound health, a sufficient amount of energy, a well-balanced brain, are obviously desirable, nay, necessary ingredients—good moral training should

supply the rest. "Fittest to survive" is an equivocal because elliptical expression, and suggests the question fittest to survive what? The logical answer is "to survive the particular environment wherein the individual is for the time being placed." But this is very much a matter of accident and is no real test of value. In the late disastrous earthquake in Sicily, some few persons survived because they could exist with less air and less food and drink than others who perished quickly for want of these necessities. These few were the "fittest to survive" their new and strange environment. That is all. It does not follow that they would have survived their fellows in a normal state of things. They might, owing to natural defects in their constitutions, have predeceased them. Anyhow their survivorship was no evidence of their worth to the State.

It must be admitted that even if we accept civic worth as the test, there is, in the present state of our knowledge, great difficulty in securing the characteristics which produce it. This fact it is that makes Positive Eugenics so much less practicable than Negative Eugenics, although the former was the first to arrest the attention of investigators. Galton, in the *Memories of his Life*, tells us that when a Cambridge undergraduate he found, on enquiry amongst his friends, that distinguished scholars and mathematicians belonged, as a rule, to families having other members similarly distinguished, and later on he collected records with regard to Fellows of the Royal Society which brought out more clearly the same point. In 1906, Mr. Edgar Schuster, who had then recently been appointed by the University of London "Research Fellow in National Eugenics," carried the proof of this inter-connection still further, and produced a most instructive human document under the title of *Noteworthy Families*, which it is hoped is only an instalment of a work admitting of wide extension. Galton himself had, in 1889, indicated the lines on which this extension might proceed in his treatise on *Natural Inheritance*—a book unfortunately now out of print. We may reasonably expect that before long many of the existing gaps in Positive Eugenics will have been filled in and the science of heredity have made an immense stride forward.

An unsigned article, headed "The Danger of Eugenics,"

lately appeared in an important weekly Review,[1] to which it is convenient at this point to make brief reply. The writer says: "The duty of refraining from marriage where there is a marked hereditary taint of very grave character, such as insanity, has long been recognised, and so far as eugenics is merely emphasising this duty, and seeking to extend and define it by some systematic research into heredity, it can only do good service." But, he adds, "the race or stock is not society . . . social evolution is not racial evolution . . . and to make the racial type the true criterion of social progress is to invert the true relation."

Everyone who has had experience of the platform or the Law Courts is familiar with the art—should we not call it artifice? —of attributing to an opponent views he never held and then demolishing them to the speaker's satisfaction. The passages just cited furnish an illustration of this. Did any Eugenist in his senses ever contend for the propositions against which this anonymous writer warns us? Society—or rather the social structure which sometimes goes by that name—is, of course, not the race or stock; yet the two things are very closely related. For, improve the race, and sooner or later you improve the institutions and beliefs—in two words, the social structure—which the race accepts and cherishes. These institutions and beliefs are, in fact, as much part of the environment of each race in turn, as is its material condition, and in the long run race and environment must be brought into harmony if either is to survive.

We are further warned in this same article that "social reforms destined to the noble objects of succouring the weak and caring for the backward in the race may be thwarted by the argument that the loser has himself to blame and that it is his stock that should be extirpated." The answer is that under Eugenics precisely the contrary happens. Once the failure of the "loser" has been scientifically traced to a biological source over which he has had no control, a far deeper sympathy will be aroused for him than before, because it will be seen that for his least desirable characteristics he often has not himself to blame but the stock from which he sprung. This sympathy, however, need not, and ought not to, extend so far as to encourage his

[1] *The Nation*, 13th March, 1909.

transmitting to others his unfortunate "losses" by propagating his kind. To encourage this would not be social justice—the goal our critic tells us we should make for—it would be flagrant anti-social injustice.

IV. *The tree of knowledge.* In the second chapter of the Book of Genesis we read that man was turned out of the Garden of Eden lest he should put forth his hand and pluck the fruit of the Tree of Knowledge. In the same chapter he is enjoined to "increase and multiply and replenish the earth," which then was, or was supposed to be, almost without inhabitants. (It now contains about 1,600 millions.) This counsel, however valuable it may have been in the age in which it was given, is plainly not suited to the times in which we live. *We* do not want reckless multiplication of human beings, neither do we want ignorance to prevail; we desire light and knowledge, and these we get through biology. There is no conflict between Biology and Morals, on the contrary, biology is a great teacher of morals by showing us how natural causes produce their natural effects. Is it not thus that we learn not to play with fire?

The characteristic creed of the Eugenist is that this world of ours is neither a fatalistic nor a haphazard world, that a great deal is in our own power, and that it is the duty of each of us to strive, in the brave words of the poet, Henley, to be "master of his fate," "to be captain of his soul." Why, on any tenable theory of the Universe, was there a tree of knowledge at all—I am not now speaking of the "tree of knowledge in the midst of the Garden of Eden," which we read of in the Pentateuch, but of the trees planted on the mountains and valleys of time—if the fruits thereof were not to be plucked? Why (to drop metaphor) was our intelligence given to us if we were not intended to use it? No one since the days of Galileo has doubted that it is lawful to study the movements of the celestial bodies; is it unlawful to study the vital processes that go on in our own bodies? Is there not ample room still left for reverence and awe, seeing that the cause of life—the vital principle—is as great a mystery as ever? As was well said the other day, "from the microscopic germ cell to the minuter nucleus, and from that to

the yet more minute chromospheres it contains, we have pursued the secret of life without getting a glimpse of its real nature."

There has been a great stir lately about the publication in England of translations of certain German books on Sexual Questions, which have been accepted without demur on the continent. Are we, therefore, more virtuous than our Continental neighbours? No. Consider the proceedings in our Divorce Courts, which are often published at length and eagerly devoured by a certain class of persons as soon as published. What conclusion would an intelligent German draw who waded through the details of a certain case lately tried in the Scottish capital? Would he say they were good reading for the young? Would he not justly prefer, from a moral point of view, the *terre à terre* facts to be found in the works of his compatriots Dr. August Forel of Munich, or Dr. Ivan Bloch of Berlin?

The evil in the world is not made any the less by attempts to conceal its existence; nor does the knowledge that evil exists lead to the doing of evil unless indeed the evil is dressed up—as it often is—in such seductive colours as to make it to appear the good. There is more harm done to morals by many a novel issued with the imprint of certain fashionable publishers than by all the scientific works ever put on the market. Of course, the scientific works just referred to, being intended for adult reading, must not be paraded or thrust before the young, whether by advertisement or otherwise. But that is the only restriction to which, in the public interest, they should be made subject.

The Eugenics Education Society claims, by spreading knowledge of the law of life, to be an essentially moral agency, and it is not to be deterred from the task before it because its methods are in some quarters denounced as "materialistic." The charge is so absurd as to be hardly worth refuting.

(1) Is it materialistic to impress on all classes the duties, the privileges, and the responsibilities of parenthood?

(2) Is it materialistic to declare, the Lambeth Conference notwithstanding, that the Church ought *not* to proclaim that marriage was in all cases "ordained for the procreation of children" in utter disregard of what the inherited defects of such future children may be?

(3) Is it materialistic to insist that there are circumstances in which the number of the family should be kept within reasonable limits, and that there are other circumstances in which that number should be as reasonably enlarged ?

(4) Is it materialistic to inculcate that the nurture of infants, both in their pre-natal and their post-natal condition, ought to be made a matter of public concern, and that if voluntary societies cannot be formed in sufficient strength to teach young mothers how to look after their babies, the State should undertake the task ?

(5) Lastly, is it materialistic to endeavour to bring about a loftier conception of the future of the world we live in, and to supply it with a new source of poetry and a new religious aspiration ?

To ask these questions is to answer them.

In conclusion I would quote the words of Darwin's great rival in discovery, the veteran Dr. Alfred Russel Wallace, in a lecture he prepared for delivery at the Royal Institution last January :

" Neither Darwinism nor any other theory in science or philosophy can give more than a secondary explanation of phenomena. Some deeper power or cause always has to be postulated. The known facts, when fully examined and reasoned out, are adequate to explain the *method* of Organic Evolution, yet the underlying fundamental *causes* are, and will probably ever remain, not only unknown, but even inconceivable by us. The mysterious power we term life will surely never be explained in terms of mere matter and motion. The irresistible inference forced upon us is that beyond and above all terrestrial agencies there is some great source *of energy and guidance* which in unknown ways pervades every form of organised life and of which we ourselves are the fore-ordained outcome."

This latest public utterance of our most eminent living evolutionist might well form an article of the Eugenic creed.