necessary multiplication of public-houses is, in spite of all sophistical arguments to the contrary, a very great evil. You cannot multiply the temptations to drink without increasing the quantity of drink consumed. As we look around we see the temptations multiplied, and we see that the consumption is excessive. We know that this country has become a byword among its neighbours for its easy tolerance, its lack of intelligent control in this respect. We can make no progress until we emancipate ourselves from conditions which forbid an intelligent policy. That is not all, but it is an essential beginning, and we believe the serious part of the community is heartily in favour of making it.

EUGENICS.

[This address was delivered by Mr. Prancis Galton, F.R.S. (author of Hereditary Genius: Inquiries into Human Faculty," and several other works on Anthropology), in compliance with a request of Mr. Crackanthorpe, K.C., at 65, Rutland-gate, on June 25, 1908.]

The Science of Eugenics (pronounced with a soft g, as in the name of the Empress Eugenie and in the word Genesis) is based on Heredity. Permit me to begin my remarks by a few words on this subject, and on what first led me to study and write about it, more than forty years ago.

It may surprise some of you to learn that the very word "heredity" was not then in common use; it does not appear in Johnson's Dictionary, and, though it has since become familiar, I was chaffed by a cultured friend for adopting it from the French.

The notions connected with human inheritance by descent were vague and confused, for the subject had never been squarely faced. The prevalent feeling was that it certainly existed in animals and plants, but that men stood in a separate category. It was acknowledged that physical attributes were sometimes inherited in human families, but the heredity of mental qualities in man was stoutly denied by many, especially by theologians on purely dogmatic grounds. There was much talk about men being equal and "masters of their own fate."

I date my first opinion from my days at college, as far back as 1840, where competitions of all kinds showed most clearly to an unprejudiced eye that men were not equal in their natural powers, but most diverse in mind as well as body. It was also noticeable that high gifts of both of these tended to run in families.

I think the first evidence of the kind that strongly impressed me was in relation to classical successes. To be a Senior Classic—that is, to be the very first classic of the year at Cambridge, where the body of undergraduates contains picked boys from schools in all parts of the country—is a very considerable feat. Yet I found that these senior classes were often so closely inter-related that out of forty-one of them six had either a father, son, or brother who was a Senior Classic, or in one case a Senior Wrangler. No mere tuition could account for this. They must have been born with exceptional capacity.

I found the same to be true of every form of bodily and mental

activity into which I inquired; those who achieved the most had a far larger proportion of eminent relatives than accident or good

teaching could account for.

There were then no means such as we have now—thanks to the development of statistical science—of measuring with numerical exactness the closeness of the various kinships. That was a subsequent achievement. Neither did I then go into the question of

fertility as has since been done.

It gradually became more and more clear to me that man was not such an exceptional creature after all in respect of heredity, but that what applied to other animals and plants probably applied also to him. I perceived that the importance ascribed by all intelligent farmers and gardeners to good stock might take a wider range. It is a first step with farmers and gardeners to endeavour to obtain good breeds of domestic animals and sedulously to cultivate plants, for it pays them well to do so. All serious inquirers into heredity now know that qualities gained by good nourishment and by good education never descend by inheritance, but perish with the individual, whilst inborn qualities are transmitted. It is therefore a waste of labour to try so to improve a poor stock by careful feeding or careful gardening as to place it on a level with a good stock.

The question was then forced upon me—Could not the race of men be similarly improved? Could not the undesirables be got rid of, and the desirables multiplied? Evidently the methods used in animal breeding were quite inappropriate to human society, but were there no gentler ways of obtaining the same end, it might be more slowly, but almost as surely? The answer to these questions was a decided "Yes," and in this way I lighted on what

is now known as "Eugenics."

Eugenics has been defined as "The study of those agencies which under social control may improve or impair the racial qualities of future generations, either physically or mentally." It aims at showing clearly how much harm is being done by some one course of action, and how much good by some other, and how closely connected social practices are with the future vigour of the nation. Its procedure is the reverse of fanatical; it puts social problems in a clear white light, neither exaggerating nor undertating the effects of the influences concerned. It is probable that even democratic governments will hereafter appreciate the value of Eugenic studies, and deduce from their results recognised guides to conduct. Such Governments would be compelled to do so in their own self-defence, if not on higher grounds; otherwise they would come to an end, for a democracy cannot endure unless it be composed of capable citizens.

The influence of public opinion, together with such reasonable public and private help as public opinion may approve of and support, is quite powerful enough to produce a large, though gentle. Eugenic effect. It is already becoming possible through Eugenic study to foresee with much assurance that such-and-such proposed action will influence a definite percentage of the population, though we cannot at present, and probably never shall be able to, foretell whether the individuals so affected will be A, B, C, or X, Y, Z.

To the statesman this individualisation is unimportant, since individuals are only pawns in the great game which he plays. The true philanthropist, however, concerns himself both with society as a whole and with as many of the individuals that compose it as the range of his affections is wide enough to include. If a man

devotes himself solely to the good of the nation as a whole, his tastes must be impersonal and his conclusions appear to a great degree heartless, deserving the ill title of "dismal" with which Carlyle labelled Political Economy. If, on the other hand, he attends only to certain individuals in whom he happens to take an interest, he becomes guided by favouritism, oblivious alike of the rights of others and of the well-being of future generations. Statesmanship is concerned with the nation; Charity with the individual; Eugenics is concerned with and cares for both.

A considerable part of the huge stream of British charity furthers, by indirect and unsuspected ways, the production and support of the Unfit. No one can doubt the desirability of money and moral support, now often bestowed on harmful forms of charity, being directed to the opposite result, namely, to the production and well-being of the Fit. For the purpose of illustration we may divide newly married couples into three classes according to the probable civic worth of their offspring. Amongst such offspring there would be a small class of "desirables," a large class of "passables," and a small class of "undesirables." It would surely be advantageous to the country if social and moral support, as well as timely material help, were extended to the desirables, and not monopolised, as it is now apt to be, by the undesirables.

Families which are likely to produce valuable citizens deserve at the very least the care that a gardener takes of plants of promise. They should be helped when help is needed to procure a larger measure of sanitation, of food, and of all else that falls under the comprehensive title of "Nurture" than would otherwise have been within their power. I do not, of course, propose to neglect the sick, the feeble, or the unfortunate. I would do all that available means permit for their comfort and happiness, but I would exact an equivalent for the charitable assistance they receive, namely, that by means of isolation, or some other less drastic yet adequate measure, a stop should be put to the production of families of children likely to include degenerates.

-One word as to what is being done to further the prospects

of Eugenics:

In the first place its study is being seriously carried on under the shelter of the University-not of Gulliver's Laputa-but of this London of ours. A Research Fellow and a Research Scholar are engaged all day on difficult statistical inquiry, rooms for the purpose being allotted to them in University College, Gowerstreet, under the official title of the "Eugenics Laboratory." This laboratory is now under the general care of Professor Karl Pearson, who, notwithstanding his onerous duties and pursuits, has most kindly undertaken its charge for the time. I being too old and infirm to attend properly to it. During the two and a half years of its existence it has done a large amount of substantial work. I have by me lists of five published "Memoirs," of five more which are nearly or quite completed but as yet unpublished, and there are besides six others in hand. It must be confessed that these Memoirs are by no means light reading, being crammed with figures and formulae.

Supplementary to the Eugenics Laboratory is the new and promising "Eugenics Education Society," under the presidency of Sir James Crichton-Browne, the object of which is to popularise eugenic results and turn them to practical account. Young as the society is, it has already been listened to with respect by the London County Council on the question what to do with inebriate

as well as timely material help, were extended to the desirables, and not monopolised, as it is now apt to be, by the undesirables.

Families which are likely to produce valuable citizens deserve at the very least the care that a gardener takes of plants of promise. They should be helped when help is needed to procure a larger measure of sanitation, of food, and of all else that falls under the comprehensive title of "Nurture" than would otherwise have been within their power. I do not, of course, propose to neglect the sick, the feeble, or the unfortunate. I would do all that available means permit for their comfort and happiness, but I would exact an equivalent for the charitable assistance they receive, namely, that by means of isolation, or some other less drastic yet adequate measure, a stop should be put to the production of families of children likely to include degenerates.

One word as to what is being done to further the prospects

of Eugenics :

In the first place its study is being seriously carried on under the shelter of the University—not of Gulliver's Laputa—but of this London of ours. A Research Fellow and a Research Scholar are engaged all day on difficult statistical inquiry, rooms for the purpose being allotted to them in University College, Gowerstreet, under the official title of the "Eugenics Laboratory." This laboratory is now under the general care of Professor Karl Pearson, who, notwithstanding his onerous duties and pursuits, has most kindly undertaken its charge for the time, I being too old and infirm to attend properly to it. During the two and a half years of its existence it has done a large amount of substantial work. I have by me lists of five published "Memoirs," of five more which are nearly or quite completed but as yet unpublished, and there are besides six others in hand. It must be confessed that these Memoirs are by no means light reading, being crammed with figures and formulae.

Supplementary to the Eugenics Laboratory is the new and promising "Eugenics Education Society," under the presidency of Sir James Crichton-Browne, the object of which is to popularise eugenic results and turn them to practical account. Young as the society is, it has already been listened to with respect by the London County Council on the question what to do with inebriate women who do not appear to be curable, and it has made useful suggestions to the Departmental Committee recently appointed by the Home Secretary to consider the amendment of the Habitual

Inebriates Acts.

600 -

I will only add to this brief address that my purpose will have been fulfilled if I have succeeded in impressing on you the idea that Eugenics has a far more than Utopian interest; that it is a living and growing science, with high and practical aims. I would ask you to make the Society known to your friends, and to persuade them as best you can to help on its good work.

GAZETTE cannot hold himself responsible in any case for the return of MS. or Sketches. He will, however, always be glad to consider any contributions, literary or pictorial, which may be submitted to him; and when postage-stamps are enclosed every effort will be made to return rejected contributions promptly. Contributors are specially requested to put their names and addresses on their manuscripts. Address: Tudor-street, Whitefriars, E.C. Telegraphic address, "Lobby," London.