HEREDITY AND DESTITUTION

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DURING the last week of May the problem of the prevention of destitution was prominently before the public. A Conference met to consider the question in all its aspects, and accounts, though meagre ones, of the papers read by specialists to the various sections of the Conference appeared in the daily newspapers.

The Conference culminated in a general meeting in the Albert Hall. The opening speech was made by Mr. Arthur Balfour, who not only performed his primary function of attracting the notice of the reporters, but also made a characteristic and suggestive address, well worthy the attention even of the specialists who listened to him.

Mr. Balfour passed lightly over the more obvious causes of destitution—causes which may be prevented or alleviated by better organisation or improved environment—and devoted the main part of his speech to the more difficult and more fundamental question of the influence of heredity on the problem the Conference had met to consider. He pointed out that advancing knowledge had discredited the older optimistic theory "that you had only to improve one generation and that, by the mere operation of heredity, the next generation would be better than its predecessor, and so on into an unlimited future of social progress based upon physiological improvement. . . . The best of scientific opinion now holds that, broadly speaking, we cannot count upon the inheritance of acquired gifts or acquired qualities in dealing with the causes which produce the future improvement or the future deterioration of mankind." Thus, in the face of forty years of compulsory education, and of that great improvement in the environment of mankind on which the last century plumes itself, we must cease to believe that there is "any

ground for thinking that there are great causes in operation which are to improve the physical basis on which, after all, education and the environment of social influences have to work."

But, if we are to rule out of court the effect of changes in the environment as a possible cause of racial improvement, we are left with the sole alternative of natural selection acting on those variations in hereditary qualities which all living beings show. A strong man lives to have a quiver-full of children, a weakling dies in infancy or youth, and leaves no offspring to perpetuate his defects. Thus the race is moulded to suit its environment. This, broadly, is Darwin's explanation of evolution, and to this process we must look to elucidate the changes which have taken place, or will take place in the average composition of our race. Hence it follows that the fundamental problem of the biological sociologist is to determine the relative rates of increase of the different sections which make up our people, for it is by a differential birth-rate alone that the inborn character of the nation, considered as a whole, is modified from age to age.

But, on this point, Mr. Balfour had a question to put to the believers in selection:

"Some of their speculations—indeed I have no answer, and do not pretend to have an answer to the arguments they advance—leave me somewhat doubtful, because I cannot see that experience supports them. For example, we are told, and I am afraid we are told truly, that the birth-rate is rapidly diminishing in the best class of the artisan population, in the middle classes, and indeed in all classes except the least fortunate. And they deduce the uncomfortable conclusion that the population of the future will be drawn from those whom they plausibly describe as the least efficient members of the community. I have no answer to that. But I have a question to put about it. If we really can divide the community in the way they divide it, I am unable to understand how we have failed to have a segregation of efficiency in the past between those who are better off and those who are worse off. In other words, it seems to me that there must be a cause in operation on their theory which would

divide us into the prosperous by their own merits—those who have got gifts which have made them prosperous and who then married the daughters of those who were also prosperous, which made them more prosperous—and those who, on their interpretation of the theory of heredity, are less prosperous and have less efficient children. That has been going on for centuries. All through history you have had the men who make a success of life rising in the social scale, to use the current phrase—and those who fail in life sinking in the social scale. You have had this interchange, and as the result surely on strict hereditary principles you would in the end get by heredity a better quality of everything that makes for this kind of efficiency at all events, at one end of the scale, and a less efficient quality at the other. And we are to be divided, not merely by one man having a better chance of education than another, but by the innate physiological character of his efficiency. I do not see any trace of that in fact. I do not see that that is going on."

When the selectionist has thanked Mr. Balfour for calling public attention to the importance of heredity in social phenomena, and for a generous appreciation of the importance of racial studies in general on the future well-being of the nation, he will turn to this problem which is left for his consideration.

His defence may well be put in the time-honoured legal form: (1) that the plaintiff's contention is not true; (2) that, if true, justification may be pleaded in the special circumstances of the case. In other words (1) there is, in fact, evidence of the segregation of special types of ability between one part of the social scale and the other, and (2) the reason why this segregation is not more marked is to be found in the want of really effective and continued natural selection for ability in our past, and still more in our present, social environment.

Let us take these pleas in order. In face of the whole tendency of popular thought during the past fifty years, it is difficult to convince a majority that differences in surroundings, education and opportunity will not explain the markedly greater tale of eminent men that have come from the upper and middle classes in proportion to their total numbers. Nevertheless, to

most of the observers who have studied the subject closely, the superiority of those classes as a source of great men is too clear to be referred solely to a more favourable environment. We will describe shortly three pieces of evidence.

Sir Francis Galton showed statistically, by a study of the families of the Judges of England between 1660 and 1865, that the chance of the son of a Judge showing eminent ability was about five hundred times as great as that for a man taken at random from the population. There is an obvious retort based on the power of Judges, especially of those in high places, to secure public recognition for the merits of their younger relatives. But that retort loses much of its point when we find that, as a class, the fathers of Judges are nearly as able as their sons, while even their grandfathers are much abler on the average than the bulk of the nation. It is true that the son of an eminent politician is said to have chiefly rejoiced over his "century" for Harrow at "Lord's" because of its probable influence on his father's career. But, before the days of cricket-worship, the power of a son to help his father to eminence in time to be of use must have been much restricted. The fathers and grandfathers of eighteenth century Judges, at all events, probably stood on their own merits.

De Candolle investigated the parental history of a large number of European men of eminence. He found that a very high proportion were sons of the Protestant Clergy. Now among professional men at all times the pressure of selection is great. Family influence now counts for much less in business or in government employment than when government posts were in the unrestricted gift of the governing class.

A statistical study of the pages of the *Dictionary of National Biography* shows that, in the eighteenth and early nineteenth centuries, our country possessed a remarkable group of closely allied families in the aristocratic class, among whom the average level of administrative ability was very high. The number of members of those families who showed undoubted ability—not merely occupied prominent posts—seems far greater than can be explained by any superiority of environment, or greater opportunities for the display of their talents. The *Dictionary of National*

Biography, it should be remembered, was planned and written by literary men, and to say the least, suffers from no under-estimate of the importance of literary as distinguished from administrative ability. Its bias tells against the conclusions to which one is forced by a study of its columns.

But, when all the available evidence in favour of the superiority in special types of ability of the upper and middle classes has been reviewed, the fact remains that that evidence has been overlooked by, or has failed to convince, such an acute and open-minded observer as Mr. Balfour, and is unknown to the vast majority of the people of this country, to whose ways of thought, indeed, it is quite foreign. Why is it, then, that this segregation of ability has not gone farther, so as to be patent to all men? Why is it that careful statistical investigation is needed to make it manifest?

The answer is complex. First, perhaps, we should put the fact that, while selection is keen enough while a family is rising in the social scale, it becomes relaxed when an assured position has been reached. It is usually the ablest men that rise; it does not always need great ability in the sons to maintain their position. Places are found for them whether they be competent or not, while well-dowered daughters tend to find husbands whom their own merits did not deserve. Selection, effective for a time, is not always permanent, and the family tends to revert to a lower plane of ability.

But, if natural selection cannot be relied on to maintain its stringency, very little social selection has hitherto taken its place. Mr. Balfour suggests, as the normal thing, that those whose gifts make them prosperous, marry naturally the daughters of those who are also prosperous. But what we have just said weakens this argument. If selection largely ceases when a family reaches an assured position, some of those who are "prosperous" are not necessarily of high ability, and even the daughter of a prosperous man will not necessarily be a satisfactory mother. But, broadly, the argument is sound. If able men married wisely, their progeny would, on the average, be much abler than the bulk of the nation. But, too often, a man who is destined to rise rapidly and far, marries too soon to take

advantage of the extended choice of mates his ability should give him, or, engaged in the struggle to excel, he marries not at all, or too late to leave a full complement of offspring. One or two children are not enough to give his ability a fair chance of making its mark in the next generation.

Even if an able man who has risen marries appropriately and leaves a large family, that family has still risks to run. Galton has shown the disastrous effect which has been produced on some of the ablest stocks which have come to the front during the last two or three centuries by the desire to secure their financial position by marriage with an heiress. An heiress is usually an only child, or one of a small family. She comes of a probably infertile race, and want of offspring destroys the family into which she marries. In case after case, Galton traced the extinction of a rising family, full of promise of benefit to the nation, to this cause. If, on the other hand, the parental ability is of the type which secures great wealth, a newly rich family does not always attract the best type of aspirant to the honour of entering it.

To one who has studied the pedigrees of many families with the hope of tracing the causes to which they owed their rise or fall, the whole question resolves itself more and more into a right choice of mates. Where there is ability on both sides, especially if that ability be of the same type, a large proportion of able children becomes almost a certainty. If physical soundness accompanies ability, and fertility gives the combination a proper chance, the family will go up in the world,—not necessarily of course in wealth, but in ability, usefulness, and reputation—in the next generation. If one parent be unsatisfactory, the chances of success are diminished very greatly. When we think of the difficulty of securing a succession of appropriate alliances, we need not wonder that the segregation of ability has not been complete.

It is probable that a somewhat greater opportunity of making suitable marriages explains the recurrence of ability of the political, administrative and military types in the group of governing families to which reference has already been made. During the eighteenth and early nineteenth centuries the aristocratic governing class formed to some extent a close

corporation, the members of which married amongst themselves, especially in a few markedly able families. It seems difficult to avoid the conclusion that this circumstance was the cause of the supernormal number of statesmen, administrators and soldiers, belonging to those families, whose abilities were great enough to earn them a place in the *Dictionary of National Biography*. Members of those families found a society ready to their hand permeated with administrative ability. From that society it was customary for them to look for mates, and a race in which able administrators were common was the result.

The comparative difficulty of demonstrating other cases of a similar kind has two causes. The more homely types of administrative ability—those types required to manage a steady family business or to keep a household in good order—do not usually win their possessors a place in the records of the nation. And the possessors of ability of special types—literary, scientific or artistic—who do find their way into the *Dictionary*, are not usually placed in their youth in a society in which that ability is specialised, and from which they can easily and naturally find a mate. Class distinctions, if class distinctions coincided with different types of ability, would be a most valuable aid to the racial development of diversified efficiency.

Though the answer to Mr. Balfour's question is complex, I believe that a complete answer can be found on the lines I have indicated.

But Mr. Balfour had another difficulty for the believer in selection as the determining factor in human racial problems. He said: "There is a certain inconsistency between these theories of heredity and hygiene, which almost everybody at the present moment regards as the great and fundamental interest of a modern civilised community, because hygiene must protect those who, on the strict theory of the survival of the fittest, had better not live and had better not have children. . . . But disease is supposed to be the only method by which, under the principle of natural selection, the destruction of the unfit is allowed to work at all in civilised societies, and, if we do succeed in producing a community in which no zymotic disease at all exists, it is impossible to doubt that after a certain number of

generations a society would exist that would be weaker to resist disease than the society in which we live."

All that is quite true; and it is to guard against the dangers of the inevitable relaxation in the protection afforded to the race by disease in the past that a more conscious selection will be necessary in the future. Our fate is delivered into our own hands. By an improved tone of public opinion, by a more careful choice of mates, by control of those who through mental defect are unfit for parentage but not responsible for their own actions, we must mould the future destiny of the race as blind natural selection has moulded it hitherto.

But, when Mr. Balfour implies that no convinced believer in selection can conscientiously support efforts at improvement in the hygienic environment, a conclusive answer can be given. It is quite true that specific infectious diseases tend to improve the race by cutting off those of weak and unsound general constitution. That function, from a racial point of view, is probably an unmixed good. But they cut off also many whose only defect is a susceptibility to one particular disease. Now immunity from certain special and preventible diseases, though useful in our present stage of civilisation, is not the highest ideal for the future of mankind. At present, Nature has to face an enormous waste of life in her attempts to protect the race in an imperfect environment. If we improve the environment, this waste can be prevented, and more energy left for selection—conscious or unconscious—to work in other directions.

For instance, many of those specially liable to tuberculosis possess valuable qualities of mind or body. In some of their offspring it is probable that, in accordance with Mendelian inheritance, the valuable qualities will appear separated from the tendency to tuberculosis. We know too little yet about heredity to acquiesce in the indiscriminate wiping out of all with a tuberculous tendency. In some cases, it is true, tuberculosis is but one sign of a stock generally unsound. Different members of the family will suffer from tuberculosis, mental defect, criminal propensities, physical deformity, or a combination of these evils. That stock should go. Public opinion, or compulsory control in suitable homes, should prevent the possibility of offspring. But,

in other cases, a tuberculous tendency is the only weakness in an individual of otherwise sound stock, and brilliant mental endowments. The selectionist wishes his good qualities to be perpetuated, and supports with a clear conscience the medical crusade against consumption.

And so with other zymotic diseases. If the infection can be banished, it is wasteful to go on gaining complete immunity at the cost of the loss of valuable strains of blood. That wasteful process was necessary in past ages, when none but the blind selection of Nature was at work. But now that a new revelation has been given to mankind, we have the knowledge to guard against the dangers of an improved environment. The power of relaxing the cruelties of natural selection has been put into our hands at the very time when we have come to realise the dangers of that relaxation. If we wilfully refuse to act on the timely light which has been bestowed on us, we shall deserve the fate which inevitably will be ours. A failure to replace diminishing natural selection with a gradually increasing conscious selection, as our growing knowledge of heredity warrants its application, will be followed by certain retribution. Though the mills of God grind slowly, yet they grind exceeding small, and a wrongly directed selection, though its effects only become apparent with the lapse of generations, will destroy a race more effectively and completely than fire and sword. Where now is the power that was Rome, or the glory that was Greece?

But, for the purposes of the Conference at which Mr. Balfour's address was delivered, the consideration of the very wide questions he proposed at the outset is not necessary. Mr. Balfour recognised the sinister import of the recent differential fall in the birth-rate, though by throwing doubt on the power of the selectionist theory to explain other facts, he sought to suggest hope that its results need not necessarily be as fatal as some have predicted. The significance of the deliberate and voluntary restriction of the birth-rate, which, though unacknowledged till lately, has been the most important social phenomenon of the past forty years, is not merely, or even chiefly, that it affects the upper classes more than the lower. The really serious thing is that it affects the most thrifty and far-seeing parts of each social

class more than the thoughtless and reckless. With few exceptions, the best stocks of every class, the best families in each rank of life, are being supplanted by the progeny of the residuum.

This is the real answer to an obvious criticism of much that has been written above. It will be said, and said truly, that, if it be admitted that the upper classes are not markedly and clearly more efficient than the lower, however that partial want of segregation of ability be explained, the significance of the selective birth-rate, as against class and class, is much lessened. We shall be justified in hoping for a succession of great men, drawn from the classes now below, and not markedly inferior in number or ability to those given by the upper classes in the past.

But, when we find that the fall in the birth-rate is not only greater in the upper classes as compared with the lower, but is greater in the most efficient sections of each class, the comparative failure of selection to bring about a wholesale segregation of ability in the upper class ceases to be so consoling. The prediction that the differential birth-rate will lead to average race deterioration, and to a loss of the net efficiency of the nation, is seen not necessarily to depend on the proof of complete class segregation of ability, but to have behind it the whole of the overwhelming and almost undisputed evidence for the inheritance of physical and mental characters from ancestors to descendants.

And this is the difference in the birth-rate which in fact we find. To take but one instance, we may turn to the oft-quoted returns of the friendly societies on the one hand and the families of the feeble-minded on the other. The birth-rate among the thrifty and careful artisans who use the benefits of the friendly societies has fallen to less than half what it was thirty years ago. On the other hand, the average number of children in the families of the mentally defective inmates of the special schools for the feeble-minded is 7.3, while the average in those that use the ordinary elementary schools is about four. A pair both of whom are afflicted with the hereditary type of mental defect seem never to produce a normal child, and yet their reproduction is allowed to go on unchecked. Several years ago, a Royal Commission reported in favour of the compulsory and permanent care and

detention of the feeble-minded. All competent to judge agree with their conclusions. Nothing has been done to carry their recommendation into effect. Whatever be the cause of the delay, it is a disgrace to the Government and to Parliament. The case is urgent. The degradation of a long list of new victims, and a continually growing load of their incompetent offspring for society to support, is the result of each year's dereliction of duty on the part of those who are supposed to watch over the welfare of the nation.

The bearing of this horrible tale on the problem of destitution is obvious. No one denies that much, perhaps the greater part, of pauperism is due to causes which are not the fault of those who become dependent on the poor-law. To meet their case, all efforts ought to be made at a better organisation of the labour market, at more sensible education than that with which the theorists of 1870 afflicted us, and greater provision against "blind-alley" occupation for boys and girls. The philanthropist and the politician will always find reasons for pressing forward reforms which salve their feelings of pity for suffering, and secure votes from their constituents. These problems received their full share of attention at the Conference, and are never likely to be overlooked when the problem of destitution is considered.

But everyone who has to administer the poor-law knows that a certain number of paupers become destitute from congenital defects of mind or body. They are physically unable to compete with their more competent fellows, and inevitably become a burden on society. In a recent number of the EUGENICS REVIEW many pedigrees were given of families, members of which generation after generation fill the workhouse, the infirmary and the prison. The women are prolific, and return to the maternity wards again and again. Their children grow up, if they grow up at all, with hereditary defects which cause the evil to spread in ever-widening circles at an ever-growing rate. Here is one part of the problem of destitution the cause of which is known with certainty, the cure for which is clear. It needs but the courage to assume the permanent care and control of these defective members of the community for one generation to prevent all the

misery and degradation to themselves which follows their so-called liberty, and to cut off for ever the evil strains of blood which uncontrolled they will disseminate through the nation. The expense would be saved in a very few years in the lessened cost of poor-law and police, while, infinitely more important, the contamination with which they threaten the race would be prevented. The problem of destitution is complex; but there is one section of it which can be, and ought to be, solved once for all.