

A FEW THOUGHTS CONCERNING EUGENICS

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The following paper is an address by Dr Bell to the American Breeders' Association at the recent convention of the Association in Washington, January, 1908. This Association was formed several years ago to encourage those persons of the United States working to improve our plants and animals. The President of the Association is Hon. James Wilson, Secretary of Agriculture, and the Secretary, Hon. Willett M. Hayes, Assistant Secretary of Agriculture. Every person who is interested in the scientific work of the Government and of individuals of the United States to create stronger and more productive varieties of animals or plants is eligible for membership. The Association is doing splendid work in collecting and distributing the results of the many workers along these lines. One branch of the Association includes efforts to improve the human race, and it was as a member of the Committee on this subject of eugenics that Dr Bell presented this address.

THE subject you have entrusted to your Committee on Eugenics is of transcendent importance to mankind. It is no less a question than the consideration of whether it is possible to apply the principles of selective breeding to man for the benefit of the human race. If it is true that "the proper study of man is man," no higher or nobler subject of research can be found.

I esteem it an honor to have been selected by you to serve on the committee having this matter in charge, and to be associated with the eminent men who compose the committee, under the leadership of Dr David Starr Jordan, President of Leland Stanford University. President Jordan, as chairman, has already presented a preliminary report for the committee, which has met with the ready acceptance of all the members.

As the Committee on Eugenics has not yet held a meeting for conference and discussion, it will of course be understood that anything I may say upon the subject today expresses merely my own individual views, for which the committee is in no way responsible.

The improvement of the human race depends largely upon two great factors, heredity and environment; and we deal chiefly with the question of heredity. It is a breeder's problem with which we are mainly concerned and not a question of education or environment.

We have learned to apply the laws of heredity so as to modify and improve our breeds of domestic animals. Can the knowledge and experience so gained be made available to man, so as to enable him to improve the species to which he himself belongs?

Can we formulate practical plans that might lead to the breeding of better men and better women? This is the great question we are called upon to consider.

The problem is one of great difficulty and perplexity, for its solution depends upon the possibility of controlling the production of offspring from human beings. By no process of compulsion can this be done. The controlling power, if it is possible to evoke it in the interests of the race, resides exclusively with the individuals most immediately concerned. This fact, I think, should be recognized as fundamental, so that our processes should be persuasive rather than mandatory.

The great hope lies in the fact that human beings possess intelligence, and a desire that their offspring may be fully up to the average of the race in every particular, if not superior. It is certainly the case that no man desires that his children shall be weak, sickly, defective, or in any way inferior in physical or mental endowments. A condition of sentiment therefore prevails that is eminently favorable to voluntary compliance

with plans that appeal to reason and sound judgment. The mere dissemination of information concerning those conditions that result in superior or inferior offspring would of itself tend to promote the production of the superior and to lessen the production of the inferior elements.

Knowledge is what is wanted, and the dissemination of that knowledge among the people. There is a wide field here for your Committee on Eugenics, or for some great national organization or society devoted to the increase and diffusion of knowledge concerning eugenics.

CONSANGUINEOUS MARRIAGES.

If it should be clearly shown that certain classes of marriages are hurtful to the offspring and others beneficial, the mere dissemination of that knowledge would of itself tend to promote desirable and prevent undesirable unions of the sexes. Would any reasonable person, for instance, think of marrying his first cousin, any more than he would dream of marrying his sister, if he really believed that any harm would result to the offspring; and if you could find one such person could you find two—for it takes two to make a marriage.

The fact that such marriages are contracted in spite of legislative prohibition in several of our states, and in spite of a considerable public feeling against such unions, simply shows that there is a difference of opinion upon the subject.

The only justification for legislative interference lies in the belief that consanguineous marriages are harmful to the offspring. The only justification for marriage under such circumstances lies in the belief that they are not harmful—at least, in particular cases. A question of fact is here involved, not mere opinion. Are they harmful or are they not? Or if they are harmful in some cases and not in others, what are the conditions under which they are harmful? These are questions that might well be considered by your Committee on Eugenics.

The experience of breeders of animals would be especially helpful in this con-

nection. It is extremely difficult to collect statistics upon a large scale regarding consanguineous unions among human beings, but a breeders' association could surely supply statistics concerning animals. We all know that the laws of heredity that apply to animals also apply to man; and statistics of in-breeding would be of great value if they could be so arranged as to throw light upon the effect of consanguineous unions in human beings. I understand that while breeders recognize an element of danger in consanguineous unions, and especially in continuous in-breeding for a number of successive generations, they constantly resort to in-breeding to perpetuate and intensify *desirable* characteristics. In fact, it is usually through in-breeding that thoroughbreds are produced; and it is chiefly through the prepotency of thoroughbreds that races of domestic animals are improved. If there are any conditions under which consanguineous unions would be of benefit to man they should be made known, so as to enable us to understand, certainly, what conditions are beneficial and what harmful, to the end that public opinion may be rightly guided in its treatment of this important subject.

We have statistics which indicate very clearly that consanguineous unions should not be contracted by defective persons, and the results obtained by Dr E. A. Fay* are specially significant in this connection. He shows that there is considerable liability to the production of deaf offspring where a deaf-mute marries a blood relative, even in cases where the original deafness was not congenital.

The statistics of the twelfth census† of the United States show that at least 4.5 per cent of the deaf of the country, and 4.5 per cent of the blind are the offspring of consanguineous marriages, but we do not know conclusively whether consanguinity in the parents *produces* the defective con-

* Marriages of the Deaf in America, by Edward Allen Fay. Published by the Volta Bureau, Washington, D. C., 1898.

† Special Report on the Blind and the Deaf in 1900. U. S. Census publication, Washington, D. C., 1906.

dition, or whether it simply *intensifies* a preëxisting tendency in the family.* The largest percentages of children of cousin marriages are found among the deaf who have deaf relatives (8.8 per cent), and among the blind who have blind relatives (9.5 per cent); whereas in sporadic cases the percentage falls to little more than 3 per cent—that is, about 3 per cent of the deaf who have no deaf relatives (3.3 per cent) and about 3 per cent of the blind who have no blind relatives (3.2 per cent) are the offspring of cousin marriages. This may mean a great deal or it may mean nothing at all. Should we find, for example, that 3 per cent of the population of the United States are the offspring of consanguineous unions there would be no proof that the consanguinity of the parents had anything to do with the production of the defect in these cases. Statistics showing the proportion of the whole population who are the offspring of consanguineous marriages are much needed, and the whole subject, I think, might very properly be investigated through the medium of the United States Census Bureau.

THE IMPORTANCE OF THE INFERIOR IS OVERRATED

In any large aggregate of individuals

the vast majority will be of the average type of the race. Some few will be markedly superior and some few inferior.

An increase in the superior element seems to be a more important factor in producing improvement than a decrease in the inferior element. Even were we to go to the extreme length of cutting off entirely the reproduction of the inferior, this would not lead to an increase in the numbers of the superior, but on the contrary to a decrease; for some of the superior are the offspring of inferior parents, just as some of the inferior are the offspring of superior.

In the case of superior, average, and inferior persons all three classes would be reproduced in the offspring, but in different proportions. There would be a larger proportion of superior children among the offspring of the superior than of the average or inferior, and a larger proportion of inferior among the offspring of the inferior. The cutting off of the inferior would simply prevent deterioration by lessening the production of inferior offspring. It would not operate to cause an improvement by an increase of the superior element.

I am much struck by the thought that neither the quantity nor quality of the

*The Deaf of the United States in 1900 from Census Table XLVII, omitting "not stated" cases relating to consanguinity of parents and Deaf Relatives.

The deaf.	Numbers.			Percentage.	
	Total.	Parents cousins.	Parents not cousins.	Parents cousins.	Parents not cousins.
Total.....	77,550	3,911	73,639	5.0	95.0
Deaf relatives (a or b):					
Deaf relatives.....	24,723	2,171	22,552	8.8	91.2
No deaf relatives.....	52,827	1,740	51,087	3.3	96.7

The Blind of the United States in 1900 from Census Table XVIII, omitting "not stated" cases relating to consanguinity of parents and Blind Relatives.

The blind.	Numbers.			Percentage.	
	Total.	Parents cousins.	Parents not cousins.	Parents cousins.	Parents not cousins.
Total.....	55,307	2,449	52,858	4.4	95.6
Blind relatives (a, b, or c):					
Blind relatives.....	10,483	993	9,490	9.5	90.5
No blind relatives.....	44,824	1,456	43,368	3.2	96.8

superior element would be increased by cutting off the inferior element from reproduction, and I begin to suspect that students of eugenics have overrated the importance of legislative interference with the marriages of the inferior.

CELIBATE FELLOWSHIPS

A similar process of reasoning leads to the conclusion that the cutting off of the superior element from reproduction would retard the improvement of the race by lessening the production of superior offspring without injuring the community by increasing the production of the inferior elements.

The establishment of celibate fellowships in some of the oldest of the British universities is a case in point. The annual grants are sufficiently large to support the recipients in comfort, so as to enable them to devote their whole lives to some branch of literature, science, or art undisturbed by the necessity of earning a livelihood. Of course there is great competition to secure such prizes, and the finest and brightest young men are selected by competitive examinations to receive the fellowships. Thus young men of the most brilliant intellectual attainments are enabled to secure a support for life—but *only on the condition of celibacy*. The moment they marry they lose their fellowships. If there are many of these fellowships, and if the plan has been in operation for any considerable period of time, it might be well for students of eugenics to inquire whether the establishment of celibate fellowships in the past has had anything to do with the scarcity of young men of the highest intellectual caliber that is so much deplored in England today. Whether it has or has not, it would certainly seem more advisable in the interests of the community that such fellowships should be granted upon the condition of marriage rather than celibacy.

PREPOTENCY—THE KEY TO THE PROBLEM

Superior individuals on the whole have a larger proportion of superior offspring than the average of the race. Of course in cases where both parents were superior

this prepotency is increased. It would be still further increased if all the four grandparents were superior, and if three or four generations of ancestors were all individually superior a thoroughbred would be produced. We are all familiar with the prepotency of the thoroughbred among animals. Indeed, as I have said before, it is mainly through the use of thoroughbreds that we improve our stocks of domestic animals. In the case of men and women who are thoroughbred in respect to the points of superiority, it is obvious that their descendants, spreading out among the population and marrying into average or inferior families, would prove prepotent over their partners in marriage in affecting the offspring, thus leading to an increase in the proportion of superior offspring produced from the average or inferior with whom they have mated. Thus not only would the proportion of superior offspring produced by the community as a whole be increased, but the level of superiority in the superior class would also be raised. There would thus be a general advance in the possession of desirable qualities all along the line from the lowest to the highest. Is not this what we mean by improvement of the species?

LEGISLATIVE RESTRICTIONS UPON MARRIAGE UNWISE

This result, I am inclined to believe, would follow from the simple process of promoting the marriage of the superior with the superior without resort to legislative restrictions upon marriage to reduce the production of the inferior.

Of course, such restrictions should be considered, but the moment we propose to interfere with the liberty of marriage we tread upon dangerous ground. The institution of marriage not only provides for the production of offspring, but for the production of morality in the community at large. This is a powerful reason why we should not interfere with it any more than can possibly be helped. There are other reasons, however, arising from a consideration of the rights possessed by individuals in a free community.

Among the inalienable rights recog-

nized by the Declaration of Independence are "life, liberty, and the pursuit of happiness." The community has no right to interfere with the liberty of the individual and his pursuit of happiness in marriage unless the interests of the community are demonstrably endangered. The happiness of individuals is often promoted by marriage even in cases where the offspring may not be desirable. The production of undesirable children is, of course, an injury to the community, and there may perhaps be cases where legal checks may be justified; but it should not be lost sight of that there are other checks that are equally if not more efficient that can be brought into play. If the conditions that produce undesirable offspring could be authoritatively stated, prudential restraints are apt to arise in cases where defective offspring are likely to be produced. Where the general intelligence of the individuals concerned is at fault, or their duty to the community is not fully understood or realized, another check comes into play far more efficient than any legal restriction. Public opinion is a great compelling force and few there are who can resist it.

Legal prohibition of marriage should only be resorted to in cases where there could be no manner of doubt that the community would suffer as the result of the marriage. Where doubt exists the community has no right to interfere with this most sacred and personal of all relations; and morality in the community would certainly be more promoted by affording the widest possible liberty of marriage than by restricting it. After all, the interests of the community are affected not so much by the fact of a marriage as by the production of undesirable offspring. The only reason why legislation against marriage should be considered at all lies in the fact that we cannot well legislate against the production of offspring. Unfortunately prohibition of marriage does not necessarily prevent the production of offspring. It is surely advisable that the children born in a community should have legal fathers and mothers as much as possible. Public opinion, and the desire of all persons to have healthy offspring, would, in my

judgment, be a more powerful deterrent to the production of undesirable offspring than a compulsory process of law. Throw wide the gates of marriage, and where children are produced close tight the doors of divorce. Every child is entitled by nature to a father and mother; and no people should produce children who are not prepared to give them parental care for life. Without going to extremes, I would say that the interests of the community demand that we should make marriage easy and divorce difficult.

NEW BLOOD

The problem of improving a race of human beings is a most perplexing one to handle. The process of improvement must be slow where the forces concerned act from within and are not amenable to control from without. Under the best conditions it would require several generations to produce sensible results; but in the United States we have, in the new blood introduced from abroad, an important means of improvement that will act more quickly and that is eminently susceptible to control. All the nations of the world are today contributing elements to our population; and we have now, and now only, the opportunity of studying the process of absorption before it is complete. Why should not Congress provide for an ethnical survey of the people of the United States. We should have definite and reliable information concerning those foreign elements which are beneficial to our people and those which are harmful.

The grand spectacle is presented to our eyes of a new people being gradually evolved in the United States by the mingling together of the different races of the world in varying proportions. It is of the greatest consequence to us that the final result should be the evolution of a higher and nobler type of man in America, and not deterioration of the nation.

To this end the process of evolution should be carefully studied, and then controlled by suitable immigration laws tending to eliminate undesirable ethnical elements, and to stimulate the admission of elements assimilated readily by our population and that tend to raise the standard of manhood here.