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The control by law of hereditary blindness.

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JULY, 1928

No. 7

EUGENICAL NEWS

CURRENT RECORD OF RACE HYGIENE



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BY
THE EUGENICS RESEARCH ASSOCIATION AND
THE AMERICAN EUGENICS SOCIETY.
ORGAN OF THE GALTON SOCIETY.

EDITORIAL OFFICE AT
COLD SPRING HARBOR, LONG ISLAND, N. Y.

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EUGENICS SOCIETIES NUMBER

ANNUAL MEETING OF THE EUGENICS SOCIETIES.

The sixteenth annual meeting of the Eugenics Research Association and the third annual meeting of the American Eugenics Society were held jointly at the American Museum of Natural History, New York City, on June 2, 1928. The meeting was called to order by Dr. Charles B. Davenport, who reviewed the development of eugenical research and education during the life of the two organizations. He pointed out particularly the changed attitude of the American people toward eugenical investigation and its practical application. Dr. Davenport presided until the end of Harry H. Laughlin's address, when Dr. Clarence G. Campbell was called to the chair.

The addresses and papers which are printed in full or in abstract in this number of the EUGENICAL NEWS were presented before the joint meeting.

BUSINESS MEETING: EUGENICS RESEARCH ASSOCIATION.

The Treasurer reported the present worth of this organization to be \$7,897.76, of which \$5,000 belongs to the prize fund which will be devoted to contests in studies on the increase or decrease of Nordic blood; \$2,000 represents an investment in 6% bonds, and \$897.76 the checking account of the Association.

The Nominating Committee of the Eugenics Research Association reported in favor of the following officers: For President until June, 1929, Clarence G. Campbell; for Secretary-Treasurer until

June 1931, Harry H. Laughlin; for members of the Executive Committee to serve until June, 1931, Madison Grant, Charles B. Davenport and Frank L. Babbott. By formal vote of the Association, these nominations were confirmed.

Professor Irving Fisher moved, and Dr. Charles B. Davenport seconded the proposition to accept the offer of the Race Betterment Foundation, under the direction of Dr. John H. Kellogg, of Battle Creek, Michigan, to hold jointly with the American Eugenics Society, a eugenics meeting in January, 1929—it being understood that the two societies will have complete control of the program and that the official delegates to the meeting will be the guests of the Race Betterment Foundation while in Battle Creek. This motion was adopted.

By authorization of the Association, the chair appointed Dr. Clarence G. Campbell, the incoming President, ex-officio Chairman of a Committee on Policy of Eugenical Research, which Committee was authorized to prepare a comprehensive outline for eugenical research and to seek ways and means for its execution.

President Howe read the following statement: "It devolves upon the President to appoint a Chairman of a Committee on Prizes for Eugenical Research. This Committee will have charge of contests and awards of any prizes which may be offered by or through the Association. I appoint Dr. Charles B. Davenport Chairman of this Committee, with authority to add to its membership such persons as he may see fit to appoint."

BUSINESS MEETING: AMERICAN EUGENICS SOCIETY.

The American Eugenics Society, in its business meeting, elected to membership on its Board of Directors, for the three years beginning 1928 and ending 1931, C. C. Little, Irving Fisher and Edwin G. Conklin.

On nominations from the floor, the Society named Arthur H. Estabrook, A. E. Wiggam, Charles B. Davenport, Charles W. Burr and Frank L. Babbott as a Nominating Committee to propose names for three directors to serve from 1929 to 1932.

At the meeting of the Board of Directors, following the adjournment of the Society, C. C. Little was elected President until June, 1929, Henry P. Fairchild, Vice-President, and Roswell H. Johnson, Secretary-Treasurer. The Secretary's office was instructed to prepare a memorandum on a change of the articles of incorporation which would permit the Society to elect as officers of the organization persons who are not necessarily member of the Board of Directors.

PRESIDENTIAL ADDRESS OF THE EUGENICS RESEARCH ASSOCIATION: THE CONTROL BY LAW OF HEREDITARY BLINDNESS.

By DR. LUCIEN HOWE,

Member Royal Society of Medicine, Howe Laboratory of Ophthalmology, Harvard University, Cambridge, Mass.

One of the best of the modern medical writers in England is Sir James MacKenzie. In the introduction to one of his most popular books he says, in substance: "Scientific men often become so much interested in a certain subject that they fail to recognize the practical applications of their discoveries."

Now I venture to call attention to the truth of this statement and to show how it is the opportunity and even the duty of students of genetics to unite in an effort to obtain the control by law of hereditary blindness.

And first of all, what is blindness? That is not so easy to define. Perhaps the simplest and best definition of it is a condition in which the person with his better eye can see only enough to count fingers at a distance of one meter—say arm's length. If he can see a little better, that is "partial blindness." If he can not see fingers at all, that is "total blindness."

And how many blind are there in the United States? To answer that question we turn naturally to the census. But even that is not complete, because at the very beginning the enumerators say: "There are those who will frequently refuse to acknowledge that they are blind, so long as there is any remnant of vision left." But after working at the subject very carefully, they give, for 1920, the total number of blind in the United States as 52,567.

And how many of these cases are hereditary? That is still more difficult to decide. The census gives insufficient data to estimate this. If we turn to the article on blindness in the American Encyclopedia of Ophthalmology—that bible of eye doctors—which includes a dozen or more big volumes on the subject, we find that the class of the hereditary blind is considered to include about 10 per cent. of all those born blind, with still 2 per cent. more with hereditary blindness which develops later in life, as in glaucoma, cataract, and the like. That would possibly give us over five thousand such cases. That seems a large number to the man in the street, who has never seen any, except an occasional blind beggar. But if he had worked in an eye clinic day after day for a little over fifty years, as I and others have, he would begin to think that all the world was blind, or partly blind. Now I know the author of that article in the Encyclopedia as a very reliable and conservative, quiet man. But perhaps he was mistaken. Perhaps we should place that total percentage of all cases of

hereditary blindness at only 9 per cent., or 8, or 7, or perhaps altogether only 5 per cent. of the total number of blind; that would give us roughly 2500 persons suffering from hereditary blindness.

Now how much do these people cost us? It is fair to estimate the minimum cost of each individual, including board and clothes at about \$500 annually, to say nothing of the cost of his education, or of his loss to the community as worker or wage earner. Now 2500 times \$500 is about one million and a quarter dollars each year. This is the sum which, at the lowest estimate, we pay for the support of persons who are blind because of hereditary eye defects. Or, if we suppose each one of them lives on the average about thirty years, their direct cost in money is at least thirty-seven millions for each generation.

Now, who pays all that money? When reduced to the last analysis, you and I help to do so. Not only do we support the schools and the asylums, but in our pity and kindness, we are ready to do that and more too.

And whose fault is it that we are called upon to make these sacrifices for those who are not members of our families, and who have no claims upon us? When reduced again to the last analysis, it is very largely your fault and mine; for the fact is that the vast majority of men and women know nothing or care nothing about eugenics, and most of them never heard of it.

And here we come back to see the truth of the statement made by Sir James MacKenzie. We are so much interested in the study of eugenics itself that we forget how to apply the lesson to the control of hereditary blindness. Or we say: "Poor things, let them have children, blind children—and continue the succession, blind children to succeed blind children—and so on, forever."

The people do not understand us. We

come together once a year to talk about the X- and the Y-chromosomes and the people think we are students of some crazy sort of algebra. Or else, some one stands up to relate the terrible inheritance as we find, for example, in the Juke family, and winds up by saying: "Isn't it awful!" And the others join in the chant and say: "Yes, it's awful!" Then they look at each other sadly and adjourn. We do not try to do anything. As the "old ladies of both sexes" think the subject is not nice, therefore we must not talk about it.

We should not think less of eugenical research, but more of its practical application. Coaxing and preaching and lecturing and teaching have proved of little avail. What we must now do is to try the effect of proper legislation. Now I appreciate that we cannot legislate the public into good morals. But we have the right, and also it is our duty to make use of what we have learned about human genetics for the sake of our fellow men, and for the economy of our own pockets. Therefore, when we are in business session, I shall ask that we pass a resolution, stating in effect that we approve of the principle of legislation which will require applicants for a marriage certificate to state in writing that neither of the contracting parties has a father, mother, sister, brother or cousin who was born blind. But, if neither of the contracting parties cannot or will not make such a statement, then they should each furnish a bond of at least one thousand dollars, satisfactory to the clerk of that city, town or county that none of the children born to them shall become a public charge.

And without discussing this resolution now, it is proper to say that I shall present this for three reasons: First, it coincides with the opinion and the wishes of many oculists, who see the sad results of hereditary blindness but are too busy to bother with eugenics at all. (Here

Dr. Howe read a sample letter from one of New York's busiest and most prominent oculists.) Second, it is in entire accord with a precedent already established. In general, if a public corporation can protect itself by insurance against loss by fire, by accident or otherwise, then why should not the state insure its citizens against blindness? The state can protect its citizens against the contraction of contagious diseases. In fact the law of New York State so protects them in making the marriage contract. Section 503 of the laws of 1917 provides that each party is obliged, in making a marriage contract, to state: "I have not to my knowledge been infected with any venereal disease, or if I have been so infected within five years, I have had a laboratory test to show that I am now free from any such disease." Third, and finally, legislation against blindness has already proved a success. As the result, especially of the work of the Society for the Prevention of Blindness, in popularizing the law to enforce protection against ophthalmia neonatorum, such law and its enforcement now exist in some form in nearly every state of the Union. Therefore, should not these two associations jointly put themselves on record as approving the control of hereditary blindness, so far as it can be done by law?

Discussion of Dr. Howe's Address; and Joint Resolution in Reference to His Legislative Proposal.

At the conclusion of Dr. Howe's address, the Chairman opened the matter for discussion, after which Dr. Howe moved and Dr. Clarence G. Campbell seconded the adoption of the following resolution:

"RESOLVED, That the American Eugenics Society and the Eugenics Research Association, in their joint meeting held in New York on June 2, 1928, heartily approve of the principle of legislation which requires

applicants for a marriage certificate to state in writing that neither of the contracting parties has a father, mother, sister, brother or cousin who was born blind; *provided* that if either of the contracting parties cannot or will not make such a statement in writing, such party shall furnish a bond of at least one thousand dollars, satisfactory to the Clerk of the particular city, town or county that none of the children which might be born to them shall become a public charge through hereditary blindness."

This was formally adopted jointly by the two organizations.

The text of the resolution and its discussion show that the purpose of applying such procedure in granting marriage certificates is to place the responsibility for the production of persons who are blind from hereditary causes as directly as possible upon the producers of such persons. Its educational effect as a deterrent is expected to be of much greater worth than its direct value in reimbursing the state in the case of bonds which might be collected by the state in case of their forfeit. It is recognized that the principle of requiring certain information as a legal requisite to granting a marriage license is common practice in all states, and that the only new element in his proposition is the matter of bonding the contracting parties against a possible or even probable preventable damage and cost to the state. No legal obstacle is anticipated in this latter provision. It is, therefore, put forward as a feasible measure in the interests of applied eugenics.

It will be recalled in this connection that Dr. Howe was the leader in the movement which gained practically universal legislative recognition by the several states, to require appropriate medical attention to new-born babies for the prevention of ophthalmia neonatorum. This was the first case in American legislative

history by which blindness was greatly reduced through the enforcement of legislative enactment. In his address Dr. Howe presented his argument showing how the second important type of blindness might be prevented by the enforcement of legislative enactment. He referred to the group of persons blind from hereditary causes, and offered the foregoing resolution as a feasible means for accomplishing the prevention of hereditary blindness in the several states.

ABSTRACT OF PRESIDENTIAL ADDRESS OF
AMERICAN EUGENICS SOCIETY: THE
PROGRESS OF AMERICAN EUGENICS.

By DR. HARRY H. LAUGHLIN,
Eugenics Record Office, Cold Spring
Harbor, N. Y.

A review of the history of American eugenics shows that during the past two decades, both eugenical research and eugenical application have made substantial progress. Each of these two fields of eugenical work is now firmly established in its own right. The Eugenics Research Association is the principal sponsor, in America, for eugenical investigation, while the American Eugenics Society is the leader in seeking to achieve an actual improvement in the inborn qualities of the American people, by applying the principles which eugenical research brings to light. The American Eugenics Society thus looks to the Eugenics Research Association for usable analyses of the basic processes of population turnover, while, in turn, the Eugenics Research Association looks to the American Eugenics Society for collaboration in providing facilities for conducting fundamental research. Thus the two societies supplement each other.

American eugenicists, led by Davenport, are developing eugenical studies along the lines laid down by Charles Darwin and Sir Francis Galton. The high points in the history of American eugenical work are the establishment of the Eugenics Record Office by Davenport

in 1910, and the holding of the Second International Congress of Eugenics at the American Museum of Natural History in New York in 1921, under the presidency of Henry Fairfield Osborn. This first event marked the sound organization of eugenics as a biological science, and the second established its relationship with the other sciences, and marked also the turning point of the attitude of the American people toward eugenics. Eugenics is now generally held to be a definitely organized unit of science, and also a profitable field of purposive effort in the application of definite principles to the improvement of the quality of future population, whether considered from the viewpoint of the family, the community, the race or the nation.

Eugenical research falls logically into three fields. The first concerns the discovery of the rules which govern the inheritance of human traits, chemical, physiological, psychological—both normal and pathological. The second field involves studies in human selection. The purpose of these studies is to understand the forces which govern differential migration, differential mate selection and differential fecundity. These three major processes operate to determine how one generation differs in number and inborn qualities from its predecessor. The influence of economic, social, educational, medical, philanthropic, religious and other forces, such as war, famine and disease, upon human selection is marked and definite. Research must analyze and understand the eugenical effect of each of these factors. The third phase of eugenical research has, as its purpose, the working out of the technique for eugenical application. This research combines the understanding of human heredity and human selection with studies on the efforts made in practical application. The analysis of the purpose and the method of such efforts indicate the most feasible line of work and supply the technique for actual application.

Research in human genetics has investigated and found out something about the rules of inheritance of more than two hundred human traits. Systematic studies have been made on human migration and its bearing upon the quality of population. Studies on the forces which govern mate selection and size of family have made substantial headway. Systematic studies have been made also on the best methods of encouraging fit and fertile matings among those best endowed by heredity, and of reducing hereditary defectiveness.

Here research reaches its end, and the workers in eugenical practice take up the task by trying actually to influence those forces which govern the quality of population in the process of turnover, so that such forces will operate in the direction of the racial and family-stock ideals which the particular family, the particular community, the particular race or nation has set for itself. Applied eugenics has demonstrated its practical value to law makers, judicial officers, historians, biographers, ministers, parents, young folks, and persons of other occupations, who have specific interests and responsibilities in any way connected with the number and inborn quality of successive generations.

The field is ripe for redoubled effort on the part of both eugenical research and applied eugenics. Eugenical research must adhere to fundamental studies on human heredity and human selection. The principal immediate task of applied eugenics lies in the field of eugenical education. It must see to it that the American people become eugenically minded in dealing with problems which concern future generations. Since 1910, eugenics has achieved a definite status, both as a science and an art. As a long-time investment which will yield high returns, time, thought, effort and money spent for eugenical research, eugenical education and eugenical application will be well spent.

ABSTRACTS OF PAPERS PRESENTED BEFORE THE JOINT MEETING.

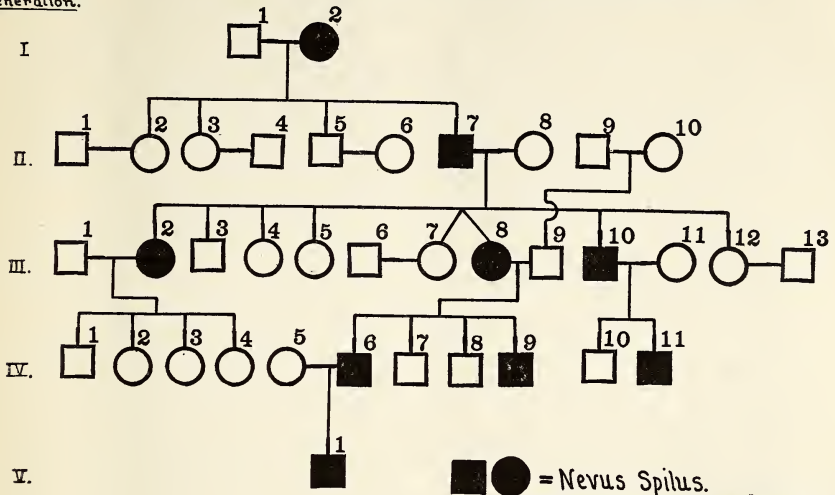
1. (a) A Family with Birthmarks (*Nevus Spilus*) for Five Generations, by Dr. Arthur H. Estabrook, Eugenics Record Office, Cold Spring Harbor, N. Y.

Nevus spilus is a congenital, circumscribed accumulation of pigment in the skin which remains smooth and otherwise unaltered. These nevi may be symmetrical or asymmetrical on the body surface and may have a widespread distribution. They are due to a deposit of abnormal amounts of melanin pigment in the skin, the resulting spots varying in color from a light yellow to chocolate brown or blackish. The etiology is unknown. Histo-pathologically the epidermis shows little change. Characteristic findings occur in the corium which normally consists of connective tissues, mast and vacuolated cells. Here parallel rows of oval or cubical cells with large oval vesicular nuclei pass down deeply into the corium from near the epidermis in a somewhat oblique direction. Between these rows of cells the fibrous elements are lessened. In addition a few giant and many other large cells containing pigment are found. Some authorities state that this growth comes from the lymphatic endothelium, others from the epidermis.

A family with nine cases of *Nevus spilus* in five generations is here described. The nevi or spots are called birthmarks or moles by the people themselves. The woman in generation I, no. 2, had a birthmark but the location is not now known. Some of her relatives had the birthmark. A son, II, 7, of this woman had a "light brown spot" on the right arm just above the elbow "in the form of a bird flying." No others in this fraternity have the spot. Three of his children, III, 2, 8 and 10 show the nevus. The first had a dark brown oval spot on her abdomen above and to the

The B-D-Family with Birthmarks (Nevus Spilus).

Generation.



right of the navel. Her four children are unspotted. III, 8, one of twins, the other unspotted, has three spots about the size of a thumb nail, a little to the right of and slightly higher than the navel. These are very dark brown in color, almost black. This woman, by a man who has no spotting in his family, has four sons, two of whom have the nevi in practically the same location on the abdomen. The oldest son, IV, 6, has an oval spot about two inches by one inch, between the navel and the appendix area. This has been growing darker with age and now is almost black. The Bradley color top shows 85% black, 10% red and 5% yellow for this spot. This man has one son, V, 1, who showed at the age of six months a slight reddening of the skin in a circumscribed area on the side of the right leg just below the knee. This patch is about one and a half by one inch in size. At the age of sixteen months, it is slightly brown in color, hardly darker than the surrounding skin but still noticeable. The skin over the spot is smooth

with no hair growth. The father of this child has one brother, IV, 9, who has a spot about the size of an adult thumb nail just above the navel. This spot is becoming larger and darker. This individual is now aged twenty.

Returning now to generation III, the brother of the twins, III, 10, has a dark pigmented spot back of the left ear extending into the tonsil area on the neck. This is very dark, similar in color to that of IV, 6. One of his two sons, now aged twelve, has a spot similar in shape and location, now about three inches long and two wide, which is getting larger and darker.

The similarity of position of these spots on the body in various members in this family is the particularly significant fact in this pedigree. Four of the individuals, III, 2, III, 8, IV, 6 and IV, 9 have the nevi on the surface of the abdomen in the navel region. Two others, III, 10 and IV, 11, father and son, have the spots on the neck. Several other pedigrees reported in the literature show

this same similarity of position occurring in the same family group. This is true not only of the pigmented but also of non-pigmented, i.e., albinic, areas. There seems to be a definite inheritance not only of the spotting but also the location of the nevi. Additional pedigrees are needed where the observer has made special notes as to the position on the body as well as the type of mole or spot found. Data on the location of skin spots in the higher animals also should be gathered.

This subject is of particular interest because of its bearing on the study of the inheritance of skin cancers into which certain types of nevi or moles may develop.

(b) Further Notes on the Southern Mountains, by Dr. Arthur H. Estabrook.

The general study of the mental and physical traits of the populations of the Southern Appalachians has been brought to a close after five years of field work. Three studies, all made in Kentucky, will be briefly reported: One of poor relief, another of the pauper idiot pension, and the third a study of income tax returns.

The statistics of outdoor poor relief gathered in a number of counties show that there are distinct pauper groups receiving aid regularly.

The pauper idiot pension in Kentucky has been given by the state for over a hundred years to all idiots and lunatics incapable of earning a living and without an estate. One person in every 773 of the mountain population received a pauper idiot pension in 1910. The ratio of pauper idiots in the non-mountain section of the state was one to 1162. The pension to one idiot is often enough to support the whole family. The pension is dysgenic for the whole state and particularly for the mountain section where the economic levels are very low.

The study of the federal income tax returns was made in several counties to

ascertain whether the individuals of local origin, that is, born in an area, or the immigrants were receiving the greater benefit from the development of the natural resources. In Perry county, industrialized through soft coal development and with a high rate of immigration, the ratio of individuals of local origin paying an income tax was one to 50 in 1924; the ratio was one to 14 in the outside stock. Breathitt county, less industrialized, had less immigration. Here over one half of the individuals paying income tax were of local stock. The level of education had no effect. The significant fact was that the greater part of these individuals were found in a few family groups; the leading families in the county. In several counties, the number of individuals paying an income tax was less than six. These counties had no industrial development and no immigration. The original stocks in the mountains had become depleted genetically by the constant migration for a period of a hundred years. Now, the best remaining take advantage of these new activities, but they are too few in number.

A conservative program of rehabilitation based on sound eugenic principles is necessary for all genetically depleted areas in the United States.

2. How Large Families Do Feeble-minded Parents Have? by Miss Frances E. Conklin and Dr. H. F. Perkins, Eugenics Survey of Vermont, Burlington, Vt.

This study is an analysis of the information on file in the office of the Eugenics Survey of Vermont. It was not undertaken as a separate study and no investigation especially for this purpose has been conducted.

Recent studies by various workers, including Paul Popenoe in California, tend to show that the rate of reproduction by the feeble-minded is not so high

as was formerly supposed. It has been suggested that there may be an automatic check on reproduction—a natural sterility in the worst cases, with a graded degree in others, corresponding roughly to the degree of mental degeneracy. Amos W. Butler found that in Indiana (1900) the average number of persons per feeble-minded family was 3.76, this number including only the children. Other calculators are Goddard (1914), children born to feeble-minded mothers, 6.2; Estabrook (1915) average number of children amongst the Jukes women, including childless matings, 3.56; excluding childless matings, 4.025; Green (1927 data at the Eugenics Record Office) showed the birth rate of the feeble-minded to be $6.43 \pm .17$.

In Vermont, this study of families including over 6,000 individuals, making up the pedigrees of random samplings of the socially inadequate families, is summarized as follows:

The average number of children per feeble-minded family (one or both parents feeble-minded or insane) 3.5. This average excludes those children who died in infancy, stillbirths, and sex unknown. Including the above the average is 4.3.

In the case of the parents not known to be insane or feeble-minded, excluding the children who died in infancy, stillbirths, and sex unknown, the average is 3.04; including the above, 3.34.

The total number of children involved in the above summary is 672, belonging to 157 families.

Of the total number of families (152, excluding 5 childless matings) 42.8% have feeble-minded children, 19.7% insane children, and 37.5% had only normal children.

The comparison was also made for the purpose of showing the percentages of the normal, of the feeble-minded, and of insane children born to parents of eight different classifications, based on the mental state of the parents.

3. The Eugenic Aspects of Modern Mormonism, by Professor Roswell H. Johnson, University of Pittsburgh, Pittsburgh, Pa.

To the general public polygamy would be expected to be the main item of eugenic interest in Mormonism. Such is not the case, for polygamous marriages are no longer entered into in Mormonism, nor has there been polygamous marriage for many years. No Mormon priest has any ecclesiastical or government power to perform any such marriage. As a consequence there are only a few hundred polygamous wives still alive, probably all past the fertile period, and rapidly being reduced in numbers. Since there is a growing sentiment in Mormonism that would make the restoration of polygamy impossible, polygamy has ceased to be as important as many other aspects of Mormonism.

The outstanding feature of Mormonism is its high marriage rate, and a high birth rate persists much more than in other religious cults in America.

The ultimate reason lies in the unique theology of Mormonism that denies the highest heaven to the celibate and the highest glory to those not having many descendants. Moreover the fact that sex is not considered indecent, as is the case in so many religions, contributes to earlier marriage and more children.

The church activities of young people in Mormonism are so arranged that there is a wider acquaintance of the marriageable young people, so that mate selection is aided in desirable ways. In the young people's societies there is instruction in desirable traits in the selection of mates and in the desirability of family life.

Of particular importance to the eugenicist is the Mormon belief that the individual lived and had moral freedom before being born. That such unembodied spirits entered an embryo and

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July, 1928

PLANS OF THE EUGENICS SUR- VEY OF VERMONT.

Notes have appeared in the *Eugenical News* concerning the Eugenics Survey of Vermont, which has been in progress for the past two and one-half years. The report for the second year, published some weeks ago, showed considerable progress in the study of a group of low grade families.

The financial backing for the third year comes again from private sources, although the Survey is being conducted as a part of the Department of Zoology of the University of Vermont. The program for the present year calls for a study of the better branches of the low grade families, with the idea of making the entire investigation as impartial as possible. That is, having formed an estimate of the extent and degree of delinquency, deficiency and dependency in these families, it is now proposed to investigate the extent to which they are also on the credit side of the ledger, and to estimate their contribution, in various ways, to the commonwealth.

The Eugenics Survey is undertaking the very considerable task of planning a Comprehensive Survey of Rural Ver-

mont. It is believed that the findings of the Survey can be made much more significant if they can be related to all of the various other phases of life. Rural areas are to be investigated for the reason that the state as a whole is profoundly rural.

Funds have been secured for the conduct of this study from three sources. One of the large foundations has made a grant sufficient to cover the salaries and expenses of administration. A large contribution in personnel and expense money has been promised by each of a number of institutes and associations, which will be coordinated in the joint study, and lastly, the state itself is assisting substantially in certain phases of the investigation.

A General Director of the Comprehensive Survey has been chosen and it is expected that announcement will be made shortly of his acceptance. He will spend a year in the alignment of the cooperating units. These will be social (including recreational), ethnic, religious, political, economic, psychological and psychiatric, public health and school hygiene, geographical, educational (including rural schools and adult education), and eugenic units.

The second year is to be used for active investigations in a number of selected rural areas in different parts of Vermont and the results of these studies will be brought together during the third year primarily for purposes of setting up an improvement program in as many as possible of the communities of the state.

The Vermont Commission on Country Life, with the Governor as Chairman, has been organized to forward the work of the investigators in the state. They are representative of many different organizations, departments of the state government and other groups which have direct responsibility for or connection with various aspects of rural life.

This very promising cooperative plan is the direct outcome of the work of the

Eugenics Survey and has been given official endorsement by the Committee on Problems and Policy of the Social Science Research Council and also by the Council as a whole.

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then later at death became disembodied to be embodied again at the Millennium. Individuals evolve in what is called Eternal Progression on toward Godhood at different rates.

Now since the progression of the individual is very largely dependent on the fitness of the body, especially the brain, which it enters, a Mormon society has a religious duty to see to it that no defective bodies are provided and that those provided be as good as possible.

Mormonism has survival value, hence an assured future. Whether it will be eugenic on the whole will depend on whether the bad distribution of birth control within the group, which has such a dysgenic effect on the American stock, can be avoided. At present intellectual Mormons are using more birth control and having smaller families than the less well informed. Only a definite effort to make birth control known to all, including the most ignorant, can counteract this dysgenic situation, while at the same time fighting against its abuse.

4. The Eugenic Significance of the Work of the English Birth Control Clinics, by Norman E. Himes, Cambridge, Mass.

The main purpose of this paper is to suggest that there are reasons for believing that the English Birth Control Clinics are functioning eugenically in so far as they are reaching those in the general population possessed of dull-normal intelligence. Of all occupational groups, the unskilled probably includes the largest proportion of the comparatively unintelligent. Roughly a third of the 3,296 women visiting ten selected English clinics (up to August, 1927)

were the wives of unskilled labourers. On the other hand, the clinics advised a goodly proportion of women who were the wives of skilled workers possessing a modest amount of foresight, prudence, and intelligence. The clinics have been powerless in reaching and in limiting the reproduction of the feeble-minded, the insane, the chronic paupers, and the persistent leaners upon the state. Reaching such groups involves different problems. The following summary table (one of thirteen thrown on the screen) deals with the occupational distribution of the husbands of these patients.

SUMMARY OF OCCUPATIONAL STATUS OF HUSBANDS.

Location of Clinic	Un-skilled	Semi-skilled	Skilled
North Kensington.....	37.9	32.8	
Manchester	32.6	11.1	31.0
Wolverhampton	12.6	5.6	77.9
Cambridge	32.0	17.2	25.2
Liverpool	46.8	16.2	19.6
Glasgow	34.6	18.0	24.6
Aberdeen	38.5	7.3	20.0
Cannock (miners).....	100.0	—	—

The arithmetic mean of the pregnancies for all series was 4.00; for living children 3.17.

The minor thesis of this paper is that as a result of the widespread dissemination of contraceptive information in England, there has already begun a convergence of class fertility rates. I have calculated, for example, that since the peace of 1918 not less than eight million books, pamphlets and brochures explaining the medical technique of contraception have been sold or given away in England. In so far as the clinics are furnishing reliable advice to the lower occupational groups of the working classes it is highly probable that we may expect in the future a stronger ebb in a tide that is just now beginning to turn. Already, in parts of Germany and in Stockholm, the lower social classes are

having smaller families (and also, I gather, a lower effective fertility) than the higher social classes. According to one's presuppositions, one will consider this change as eugenic or dysgenic. I take the position that it will probably have eugenic results.

5. A Note on Mayflower Descendants, by Mrs. Lydia H. Jewett, Melrose, Mass.

As a descendant of Mayflower stock, Mrs. Jewett reviewed the increase of her particular family branch through successive generations, and showed, among her own near kin as an example, that the Mayflower blood, far from dying out, is increasing rapidly. For example, Mrs. Jewett's own grandmother had 11 children, 6 of whom became parents; 35 grandchildren, 21 of whom became parents; more than 41 great-grandchildren, and, up to the present time, more than 21 great-great-grandchildren.

6. A Study of the Size of Families of the Borderline Class, by Mr. Leon F. Whitney, American Eugenics Society, New Haven, Conn.

Card records of 1631 children in schools for subnormals in an Eastern seacoast city were studied, and 151 such families interviewed. Of these 121 families were Italian, and they averaged 7.09 children per family. Allowing 17% for childless couples, the number of children per family of Italians is close to six.

The borderline class, that is, the people who are defective but yet able to take care of themselves so that they seldom come to the attention of the public, constitutes our most serious population problem. Persons in this class are often considered normal because they do not cause trouble, and hence the frequent conclusion of investigators that half of the feeble-minded in our institutions come from normal parents is erroneous. A high percentage of children in

schools for subnormals comes from this borderline class and not from truly normal persons.

From card records a table was prepared which shows that the Italians and negroes furnish six times as many families of subnormals as do the native-born white of native-born parents.

7. A Family Showing Serum Sensitivity Associated With Other Protein Reactions, by Mrs. Dorothy Osborn Bagg, Croton Lake, N. Y.

This study is based on the collective history of a single family in which four first cousins (two pairs of sibs, two and a half to thirteen years of age) have shown a very unusual reaction to prophylactic injections for whooping cough, diphtheria and tetanus. Medical experience shows that such reactions are exceedingly rare. The oldest of the four has shown eczema from infancy, the other three so far have exhibited no other disturbances of a similar or allied nature. The family shows many individuals with a wide range of marked protein reactions, asthma, eczema, hay fever, hives and two instances where insect stings caused severe immediate reactions with nearly fatal termination.

The reactions described above are apparently allied to and similar in nature to asthma, eczema, hay fever and hives, and indications are that they are recessive in inheritance. This study suggests the importance of early recognition of such reactions, a valuable clue in such cases being an investigation of the family history.

8. The Eugenic Aspects of Pelvic Irradiation, by Douglas P. Murphy, M.D., Gyneccean Hospital Institute of Gynecologic Research, University of Pennsylvania, Philadelphia, Pa.

The literature has been completely reviewed, which deals with reports of human pregnancies associated with ma-

ternal, pelvic, radium and x-ray therapeutic exposures. The pregnancies fall into two groups: (1) those taking place following the pelvic irradiation, and (2) those in which the exposures were received at some time after conception had taken place. The word therapeutic is used in distinction to the term diagnostic, the latter referring to extremely short exposures of the x-ray.

Children with severe defects have been born to both groups of women. Treatments taking place *during pregnancy* have been followed by more frequent, more uniform and more severe disturbances than when the irradiation preceded conception.

It cannot as yet be stated whether irradiation of the pelvis before conception has any bearing upon the health of the subsequent child.

Where irradiation took place during pregnancy, of 44 full-term children there were 27 children defective, 14 being classed as microcephalic idiots. The idiocy was apparently due to the irradiation. These treatments were mostly accidental. Prevention of this damage in the future will be possible, if every woman receiving pelvic irradiation, during the child-bearing age, is thoroughly curretted at the time of the treatment, in order that no unsuspected living embryo will be allowed to survive the irradiation.

9. Ethnic Changes Arising in a Community Area as a Result of Differential Rates of Fusion, by Mrs. Bessie Bloom Wessel, Director, Study of Ethnic Factors in Community Life, Graduate School, Brown University, Providence, R. I.

At a time when we are all frankly interested in national origins, in ethnic changes and in rates of fusion, it is deemed laudable to make statistical analyses of population. It is especially exciting to be able to arrive at a definite quantitative value which may be as-

signed to this or that factor in the situation. Every problem seems to demand a quantitative symbol by way of explanation. But, will the ardor for such quantitative measures cool when we discover that any one of several measures, each apparently at serious variance with the other, may be used to describe the same general process?

It is my task to point out the ethnic changes which have occurred in at least one community as a result of what may be called differential rates of fusion. In order to indicate these processes several measures of change need to be used.

The material presented is drawn from data relating to an ethnic survey of Woonsocket, R. I. This Survey was made by our Study according to the general methods described at the Eugenics meeting last year (and reported in the EUGENICAL NEWS of August, 1927). Racial histories were secured for each child in the public schools. Histories contained information pertaining to the ethnic and geographic origin of parents and grandparents. This paper deals more particularly with further differentiation of that part of the material which throws light upon *fusion processes* and which have been compiled since our last meeting.

The "national origins" of Woonsocket public schools are indicated in Col. 1 of Table II. (Presented at the meeting.) These figures were arrived at by a count of grandparents. The summary indicates that 76.90% of the population is of homogeneous stock, i.e. all 4 grandparents are of the same ethnic stock. The actual melting pot then constitutes 23.1% of the total stock. This is a gross rate of fusion. It remains fairly constant for several communities studied.

Drachslar, in his intermarriage study in New York City, and the writer in her several studies find that, by contrast to this figure, the gross rate of intermar-

riage (for 1st and 2nd generation immigrants) fluctuates about the figure 13 per hundred marriages. This, too, is a gross rate of fusion, as indicated by intermarriage.

These two figures tell us something about the rate at which amalgamation is taking place—they are gross rates. They do *not* describe what is actually happening to the population.

The real questions are:

In what degree do the various strains affect the population as a whole? and

How many children are in turn affected by these processes and in what manner?

The items 76.90 and 23.10 are significant only if we are seeking an arithmetical value for the various blood strains in the population. As they stand they have limited, if any, biologic significance for a study of population. Biology and eugenics are interested in the individual and in the race; not in the percentage value of a certain strain in the aggregate blood stock.

We can proceed best by following the processes involved for 2 or 3 typical groups in the population. For example, let us examine the figures for the French Canadians.

French Canadian stock constitutes
35.43% of the total blood stock of the public school population.
30.34% of the homogeneous stock (i.e. out of 76.9% representing total homogeneous stock).
5.09% of the melting pot (i.e. out of 23.1% representing the total melting pot).

In every case French Canadians represent the greatest numerical weight. On the other hand their rate of fusion is low, 14.36%.

5.09% in the melting pot
 $\frac{35.43\% \text{ total weight of French}}{\text{Canadian Blood}} = 14.36\%$

The English and the Irish, however, with fusion rates of 46.94 and 42.35 have weights respectively of only 4.37 and 3.82 in the melting pot. The rate of

fusion alone has no relation to the weight of influence in the melting pot,—the latter depends on the total weight of a given stock in the population. A large group diffusing at a low rate affects the melting pot more heavily than a small group of diffusing rapidly.

These figures tell us what is happening to the individual groups; they indicate the rapidity with which they are being disintegrated.

The question as to how these rates of diffusion affect the population is still unanswered. In order to answer this we must inquire into the manner in which these strains have distributed themselves—not in the total blood pot—but through the individual children. We have therefore classified all children according to the amount of blood they carry of each stock. A child is all English, $\frac{3}{4}$ English, $\frac{1}{2}$ English, $\frac{1}{4}$ English and so on, depending upon the number of English grandparents. The results are somewhat as follows:—

English blood (with a numerical weight of 9.31 in the total blood pot) is diffused through 11.57% of the children.
French blood (with a numerical weight of 35.43 in the total blood pot) is diffused through 40.68% of the children.
Irish blood (with a numerical weight of 9.02 in the total blood pot) is diffused through 13.56% of the children.

These figures indicate differential rates in their influence upon the population. They are themselves the product of complex social processes, operating within the melting pot,—migration, birth rates and death rates, and the period at which intermarriage takes place. The number of children who carry English blood, for instance, is determined by the fact that intermarriage in this group began earlier in the history of the community

than it did for other groups. There are, in comparison with other groups, more children who are $\frac{1}{4}$ English. There are more children who are $\frac{1}{2}$ English than there are children all English. The distribution is entirely different for the other groups.

In this connection I might add that all tabulation made with the individual child as the unit, when compared with those in which the sib is the unit, leaves the Old American and British groups with smaller numerical weights, indicating quite clearly a differential birth rate.

In Conclusion:

The rate of intermarriage is one thing—13 per hundred for 1st and 2nd generation immigrants.

The gross rate of fusion for all generations represented in the population is another; the melting pot constitutes 23.10% of the population.

The rates of diffusion are measures relating to the specific groups and may vary from 0 to 100.

The manner in which these specific rates or the gross rate of fusion affects the population is measured by an entirely different set of facts—namely, the number of children affected and the manner in which the crossing has been accomplished.

No single figure may be taken to indicate ethnic change or fusion. Any one of these rates taken at random might be said to measure change. There are several processes at work which make for differential rates of fusion and the picture is incomplete unless several indices descriptive of these processes are called into use.

Lastly, experience in obtaining ethnic data in 4 communities indicates that all the necessary materials for arriving at an analysis of national origins exist in the community area (and therefore in the United States). As a matter of fact, the analysis of the area is the only method which really tells us who is here.

Every community offers corroborative evidence in historical records, through genealogies, and through contact with oldest inhabitants.

Parallel studies are possible, which call into use the historical method, vital statistics and so on. The fact remains, however, that an analysis of the population based upon a community area can be so organized as to throw evidence on all these aspects of the subject at one fell blow. The ethnic survey tells us who are in the community, when they got there, and what happened to them after they got there.

10. Symmetry in Identical Twins, by Miss Laura Bliss and Dr. H. F. Perkins, University of Vermont, Burlington, Vt.

Thirty-four pairs of same sexed twins were examined. Sixteen of these were undoubtedly identical—six pairs male, ten female. They were studied as to their similarity and differences in nine points, eyes, ears, nose, teeth, eyebrow, hair whorl, right or left handedness, hand prints and mentality.

The purpose was to compare the twins in regard to their correspondence with one another in parallel imaging (e.g. left of A like left of B), and mirror imaging (e.g. left of A like right of B). Bilateral symmetry of individuals (e.g. left of A like right of A) was examined in true or monozygotic twins for comparison with non-twins. Parallel and mirror imaging were found in all eight parts tested, and in all fingers and palm patterns.

The suggestion that twins show more bilateral symmetry than non-twins was found not to be true; in our cases the opposite condition obtained.

Parallel imaging is more frequent than mirror imaging in twins and non-twins, 76.6% in true twins and 34% in two-egg twins as against 68.6% and 30% for mirror imaging. These figures show too that both kinds of imaging are

more than twice as common in true twins as in two-egg twins.

The statement that the forefinger (second digit) shows most similarities in true twins is contradicted in these cases which show the greatest amount of all three sorts of similarity in the five digits.

The repetition of pattern in all four fingers is common in identical twins. It was found in 38 out of a possible 75 times (15 pairs of twins, 5 chances in each pair of twins for all 4 thumbs, etc., to show the same pattern). Nearly as frequent is the case of 3 alike and one different (21 out of 75 times).

Mentally the twins examined were found to be strikingly similar as to the I. Q. and as to the details of their psychological tests. The youngest ones were more alike than the older ones, and the similarities were particularly close in the answers to those questions which bore upon the more closely inborn or inherited tendencies and abilities.

11. Relation of Childbirth to Maternal Age and the Interval between Births among the Pueblo Indians, by Dr. S. B. de Aberle, Yale University, New Haven, Conn.

Birth records for the last twenty-eight years were collected for a typical Indian village, the pueblo of San Juan in New Mexico. From a list of 1076 births secured from the books of the adjacent parish, only 282 could be verified by families living in the community, and these form the basis of this study. Children are always christened, usually within the first ten days of life. Twenty-seven years was the modal age at which women gave birth to viable children and included about half of the mothers; the range was from 13 to 45 and the distribution approximately normal.

For the same mother the modal interval between successive births of children who lived to be christened was 23 months and the range 8 to 78. The

graphic representation of the data results in the curve being skewed to the right but 90 per cent. of the cases are normally distributed about the mode between 8 and 42 months.

Since 1924, when record taking was started by the Red Cross Nurses, eight per cent. of the children have died without being christened. If typical of the preceding period, this per cent. would not seriously affect the above results.

The shape of the curve corresponds exactly with that compiled by March and Davenport for colonial women. It is significant that in two distinct races living under very different social and climatic conditions the characteristic interval between births should be identical.

12. The Inheritance of Migraine, by Wm. Allan, M.D., Charlotte, N. C.

The direct inheritance of migraine has for the past century been becoming more evident. Occupation (1), sex (2), and family nervous or mental diseases (3) are not relevant.

Buchanan's work (4) tended to show migraine as a recessive trait. Smith's evidence (5) was partly on the side of recessiveness, partly on the side of dominance, and partly inconclusive. His conclusion was that migraine was a dominant trait in some way sex determined.

(a) I find a history of migraine in 60% of the adult population. In a review of five hundred migraine cases, (b) when both parents have migraine, 83.3% of the children have it; (c) when only one parent has migraine, 61% of the children have it, and (d) when neither parent has migraine, it has been found in 3.7% of the children.

A history of migraine (e) in one or both parents was obtained in 91.4% of 382 migrainous patients. (f) When both parents have migraine, 36% of the children have it; (g) when one parent has migraine, 60% of the children have it; (h) when neither parent has migraine, 8.6% of the children have it.

The incidence of migraine in the sibs of the migrainous (i) was 67.2%, while the incidence of migraine in the sibs of the non-migrainous (j) was only 11.5%.

It will be seen that the information about headache in parents and sibs secured from members of the family who did not have headache as in items (d) and (j) is worthless. The figure in item (h) is simply the error recorded in item (e). The figures in items (f) and (g) constitute very little evidence that migraine is a recessive trait and it seems likely that on more careful questioning about both parents that these figures may be reversed. All the other evidence, items (a), (b), (c), (d) and (i) point strongly to migraine as a dominant trait.

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13. Inheritance of Age of Onset of Menstruation, by Paul Popenoe, Pasadena, Calif.

In 200 families, physically and mentally normal, age of onset of menstruation of mother was found to be correlated with that of daughter (351 daughters) $.40 \pm .03$. The mean age of daughter at first menstruation was $13.19 \pm .05$, that of mother $13.60 \pm .06$ years, but the latter figure is subject to correction because it represents the arrays of the correlation surface, on which each mother appears as many times as she had daughters.

The correlation between sisters in 200 families (mostly the same as in the foregoing study) was found to be $.39 \pm .03$. The mean age of onset of this group was $13.28 \pm .05$ years.

From these preliminary results it appears that the age of onset of menstruation is no less dependent on inheritance than are most physiological and anatomical characters in man.

For collecting most of the family histories used in this study, I am greatly indebted to Ruth V. Atkinson, Associate Professor of Physical Education, University of California at Los Angeles.

14. Progress in the Study of Eugenic Sterilization in California, by E. S. Gosney and Paul Popenoe, Pasadena, Calif.

The inception of this study, which is being financed and directed by Mr. Gosney in consultation with an advisory committee made up of specialists in many different lines, was described at the meeting of this society last year. Six technical papers describing various phases of sterilization in the state have now been published, and a dozen more are in press or in preparation. These are being distributed among institutions and individuals who are professionally interested in the subject, and a digest of them will also appear in a more popular volume to be issued later in the present year.

The total number of sterilizations has now passed 6,000, the figures up to the first of this year being given in the attached table. There have been four deaths—two under anesthetic (a man and a woman) and two women from peritonitis. Three cases are known where the operation of vasectomy in the male seems to have been unsuccessful, as judged by the birth of offspring subsequently; and about half a dozen cases of pregnancy among females. At the request of Mr. Gosney, Dr. Robert L. Dickinson, secretary of the Committee on Maternal Health and one of the senior gynecologists of the United States, spent some time in California last winter, reviewing the surgical and hospital care of patients, which he pronounced satisfactory, and introducing a routine test

by tubal insufflation after salpingectomy, in order to do away with undiscovered failures of technique.

Legal aspects, especially as concerning criminology, will be taken up at the annual meeting of the American Bar Association in July at Seattle.

In addition to the study of sterilization of women in private practice, which has been under way for a year and a half as a control, and for which histories of more than 500 non-psychotic patients have been gathered, a study of the sterilization of men in private practice has now been undertaken. One physician in California has done 150 vasectomies for this purpose. This study is expected to throw light on the actual physiological effects of vasectomy, which are now in dispute.

STERILIZATIONS PERFORMED IN CALIFORNIA STATE HOSPITALS FOR MENTALLY DISEASED AND DEFECTIVE PERSONS, UP TO JANUARY 1, 1928.

Institution	Male	Female	Total
So. Calif. State Hospital (Patton)	1189	504	1693
Stockton State Hospital	953	502	1455
Norwalk State Hospital	304	203	507
Napa State Hospital	137	398	535
Agnews State Hospital	10	134	144
Mendocino State Hospital	112	51	163
Sonoma State Home for the Feeble-minded	527	796	1323
Total	3232	2588	5820

INFANCY AND HUMAN GROWTH.

The leader in this country of an important branch of child research, author of "The Mental Growth of the Pre-School Child," has just published a new volume giving the outcome of his re-

searches. In this new volume there is an introductory chapter on the cycle of mental growth—the entire span of mental life of the individual from birth to death. The infancy period is discussed in this book in three parts: 1, on the observation of infant development; 2, genetic studies of infant behavior, and 3, the significance of infancy. In part 1 are discussed the interesting and novel apparatus invented at the Yale Psychoclinic, particularly the cribs and observation dome. Very important chapters in this part deal with monthly increments of development in infancy and normative summaries for the different levels from 1 to 12 months and then at longer intervals to 30 months. This part is accompanied by important curves of mental growth.

The second part comprises a series of slightly related essays, such as the symptoms of giftedness in infancy, irregular deviations in developmental trend and tempo, drawing as a developmental index, glandular factors, twinning, and premature infants.

The number of topics treated throughout the book is very large and we know no other that is so full of new material. If any suggestion were to be made, it is that some of the phenomena strike us more in the nature of differentiation, rather than increase in size or amount which seems to be the primitive connotation of "growth." In other words, the book might perhaps as appropriately have been called "Infancy and Human Development."

Arnold Gesell, 1928. *Infancy and Human Growth*. New York: Macmillan. 418 pp., 65 figures.

PRESERVATION OF RACIAL STOCK.

"I shall have no fear for our democracy if our people are truly educated and self-controlled and of the right racial strain. This will be facilitated if we persist in our present determination to

preserve our racial stock, to exclude people of every different racial strain and political experience, having neither initiative, self-reliance nor useful habits of thought. Till we adopted our present immigration policy, I was apprehensive. In twenty years we had added to our population over 10,000,000 people from Asia and southern and eastern Europe, who, by reason of their inheritance, were not trained to take part in a self-governing enterprise. This measure removed the greatest menace to our institutions and safeguards them at their very roots. There are those who, for selfish reasons, would repeal it. They seek so-called cheap labor. They would sell our birth-right for a mess of pottage. Their arguments are the same as the ones used by those who gave us slavery. The retention and extension of this measure will keep our stock reasonably pure and homogeneous and give us a citizenship which will be a guarantee of the future. The right kind of people can run any sort of government; the wrong sort of people can not run any kind of government.'''

(From an address by David F. Houston, president, Mutual Life Insurance Company, New York, January 28, 1928.)

THE NEW CRIMINOLOGY.

The first named author, until his death recently, was for many years professor of neuro-pathology in the Post Graduate Medical School Hospital in New York City, while his collaborator has been a writer and student of the subject of criminology.

The first part of the book is devoted to a review of the history of the free will controversy, and the authors bring it down to the mechanistic theories of the present day. Then follows briefly a summary of the statistics on the cost of crime, its prevalence and the methods of treatment. The present knowledge of cell chemistry and the matter of the endocrine control of human behavior are

then presented. Dr. Schlapp's clinical studies are used as a basis and case histories from his own experience are given. There is demonstrated a relation, in the cases selected, between chemical imbalance and improper functioning of the endocrine system and those deficiencies in behavior which were the underlying causes of the acts which resulted in crime.

The authors believe that "feminism and its allied evil, industrialism . . . have caused a widespread emotional disordering of the female organism. . . . The restlessness of women, their baneful pushing into activities for which they are biologically not suited and the resultant rise of the number of congenital defectives are all fruits . . ."

A scheme is then presented wherein all persons, convicted of crime, are to be placed in detention hospitals instead of prisons. The criminal, thus recognized as a sick man, must undergo a complete examination and perforce take the proper medication for the endocrine disturbance.

The facts concerning the endocrine basis of the control of human behavior are presented in a very pleasing manner. The reviewer feels, however, that only one aspect of the picture of the cause of crime is presented. One finishes the book feeling unsatisfied that there is no further explanation of the causes of these endocrine disturbances other than the generalization quoted above.

Dr. Max Schlapp and Edward H. Smith, 1928. *The New Criminology*. New York: Boni and Liveright. 325 pp. \$4.00.
A. H. E.

SIZE OF OGDEN FAMILIES.

Paul E. Nelson, a teacher in Ogden High School, Ogden, Utah, reports that among his students the average number of sibs in the students' families is 7.32. The fathers of these students belong to fraternities with an average number of 7.53 brothers and sisters, the mothers to families of 7.19 children.

FELLOWSHIP ON BIRTH CONTROL HISTORY.

In 1926 Mr. Norman E. Himes was granted a fellowship of the Social Science Research Council to make a study of the "History of the English Birth Control Movement, with Special Reference to the Development and Work of the Clinics." A renewal was granted the following year. Besides several articles, Mr. Himes has in preparation a book on the clinics to be published in the spring of 1929 under the title, "The English Birth Control Clinics," and another work to be published somewhat later entitled, "A Documentary History of the English Birth Control Movement: 1820 to the Present Day."

Eventually Mr. Himes plans also to edit some hitherto unknown papers on Neo-Malthusianism written by John Stuart Mill. At a still later date there will appear a source book of materials on Neo-Malthusianism which will be a reprint of portions of scarce but influential Neo-Malthusian tracts. The same writer will also edit a page for page, line for line reprint of Francis Place's "Illustrations and Proofs of the Principle of Population" (London 1822) with an extensive appendix dealing with the influence of Francis Place on nineteenth century population thought. The first two books will contain new material of eugenic interest.

BLUE TOOTH ENAMEL.

Occasionally dentists report a patient who possesses "blue tooth enamel." In such patients the second dentition is lost at an early age, the teeth having very shallow roots and an enamel which is a dark grey blue. The other striking feature of this quality is that it seems to "run in families." From the fragmentary pedigrees which are reported, its family distribution seems to suggest that it may be a Mendelian dominant.

CURRENT PERIODICALS.

The *Quarterly Review of Biology* for June opens with an article by John Tait of McGill University on the old topic of homology and analogy, treated from the new point of view of "plasis," or the phylogenetic factors that determine fitness. R. Kellogg concludes his important history of whales. George Valley of Yale discusses broadly the relation of carbon dioxide to bacteria and concludes that bacteria require it. R. Hegner traces the parallel evolution of mammals and their parasites and concludes that it speaks in favor of the hypothesis that monkeys and man are of common descent. L. J. Reed summarizes Haldane's mathematical papers on selection. R. M. Aslund traces the close relation between size of testis and mating activity in various vertebrates. Pearl states that in passing from reptiles to man, mortality is due increasingly to the breakdown of organs derived from the ectoderm and mesoderm.

The *Archiv für Rassen- und Gesellschafts-Biologie* for May opens with an extensive paper by Karl Kurz of Bremen on the interdependence of size of family and economic position of the parents. Local sources are chiefly utilized for data. The conclusion is reached that the intellectual inheritance of the class with larger earning capacity is threatened by their numerous small, largely 1-child, families. Lenz discusses these results. Dr. P. Jolly discusses the marriage rate of those wounded in the war and finds it above the average for men of their age. Von Behr-Pinnow stresses the need of teaching genetics and eugenics in the schools of Germany; there is the same need in this country. Weissenberg considers briefly the new Russian criminal law. Abortion is punished with imprisonment for 1 to 5 years; some attempt is made to regulate extra-marital sexual intercourse. The usual critical reviews follow.



