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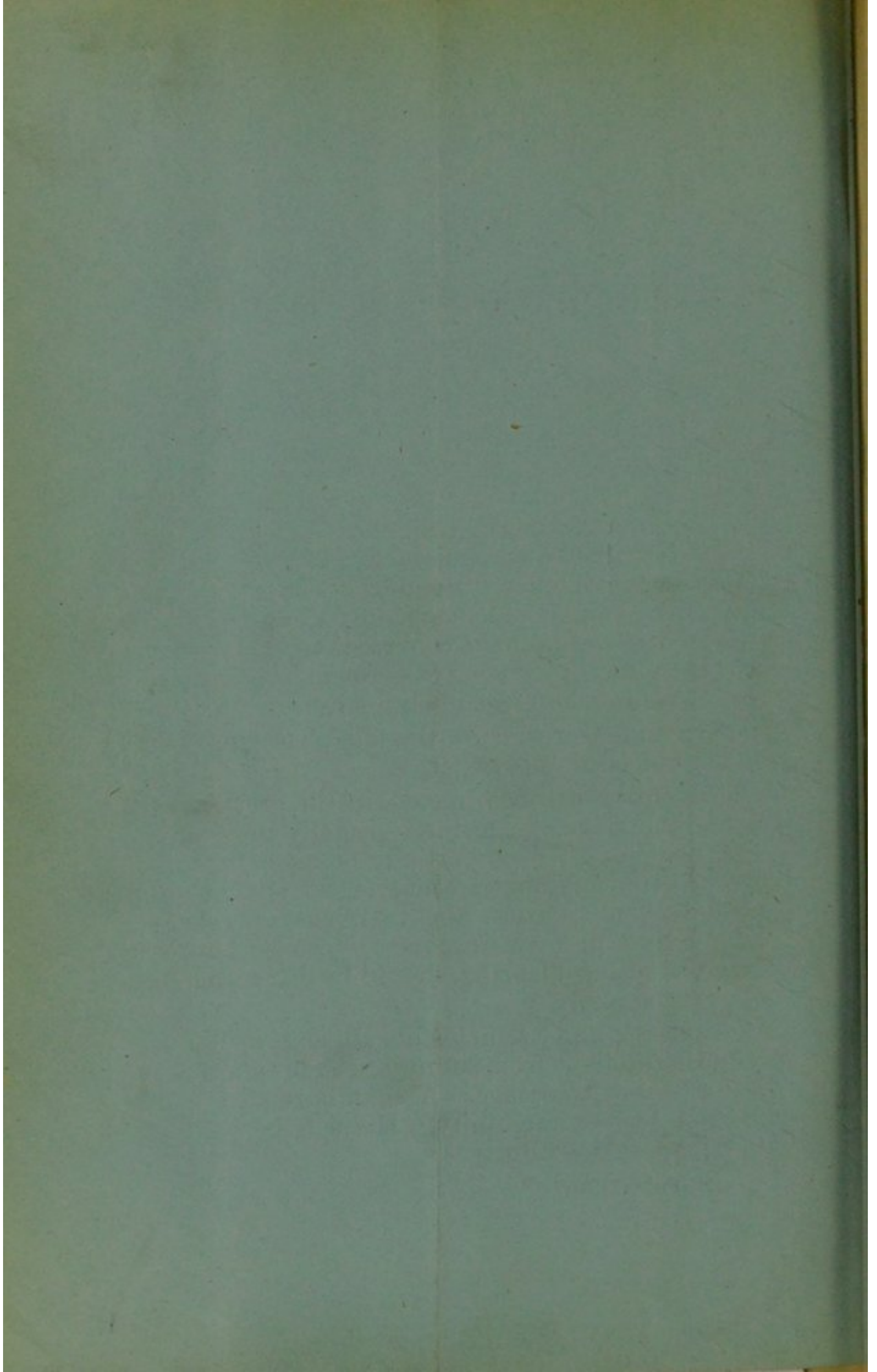


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12 TO 1, 3 TO 4 & 7.30 TO 8 P. M.

595th





CONSANGUINITY IN MARRIAGE.

BY E. S. McKEE, M. D., CINCINNATI.

We find, permeating all classes of all nations, the belief that consanguineous marriages are followed by evil effects upon the offspring. This tradition gains credence from occasional cases where dire results have occurred, and the *post hoc* is taken for the *propter hoc*, the many instances where no evil happened being forgotten.

An endeavor to show the falsity of this belief is the object of this paper.

Attention will be directed, in the greater part, to the marriage of cousins, especially those of the first degree. (This is partially because the majority of consanguineous marriages are between cousins, and because the marriage of relatives nearer than first cousins, even if proven not to be harmful to the offspring, should be discouraged on other grounds.)

Consanguinity denotes blood relationship. It is quite different from affinity, which signifies relationship by marriage. A man is related to his brother by consanguinity. His wife is related to that brother by affinity.

Lineal consanguinity is that which exists between persons in the direct line of descent or

ascent. The consanguinity is collateral when two persons descend from a common ancestor, but not one from the other.

Great confusion has arisen from counting degrees of consanguinity by two different methods. Civil law counts the number of generations up from the one individual to the common ancestor, then down to the other. The canonical law counts the degrees in but one line, the longer, from the common ancestor. The canon law, formulated by Pope Gregory I., A. D. 590-604, is imperfect. It gives persons the same relationship to a certain person when it is not true. Prohibiting marriage in the third degree by the canon law prohibits many more than by the civil law.

The relationship existing between Jupiter and Juno, Osiris and Isis, shows that unions of the closest degrees of consanguinity were not abhorred in ancient mythologies. The story of Edipus and Jocastra shows that marriage in the direct line of descent was looked upon as impious. The ancient Egyptians intermarried very closely, a large proportion being between brother and sister. The Persians did likewise, as did also the Israelites prior to Moses. Abraham married his half-sister, Sarah; Isaac his first-cousin, Rebekah, and Jacob his two first-cousins, Rachel and Leah. This was a nation renowned for vigor, and in the first fourteen generations reached six hundred thousand fighting men. The sons of Adam must have married their sisters, and we are all descendants from consanguineous marriages, and, according to some, idiots.

The Mosaic law, Leviticus xviii., prohibits the following marriages: With a parent, step-mother, sister, half-sister, grand-daughter, aunt or uncle's wife, step-daughter or step-grand-daughter,

or with a wife's sister during the lifetime of the former.

The Greeks forbade marriage in the direct line of descent, yet permitted it between half-brother and half-sister. The Athenians allowed marriage between brother and sister of the same father, but not of the same mother. The Lacedemonians allowed marriage between uterine brothers and sisters, but not between those having the same father and mother.

The Romans excluded marriage between brothers and sisters, whole or half, and any marriages nearer in degree than first-cousins were practically illegal. The institutes of Justinian forbade marriage in direct line and in collateral line within the fourth degree. First-cousins and all remoter kin might marry.

The present canon law, in force in most Roman Catholic countries, forbids marriage only inside of the fourth degree, that is, third-cousins are forbidden to marry. The civil law allows the first civil degree, that is, first cousins, to marry.

Henry VIII. modified very stringent marriage laws in England. They are now practically the Levitical. First-cousins may marry, also nephew and great-aunt, niece and great-uncle. While a man may not marry his grand-mother, he may his sister. This law holds in Great Britain, Ireland, and the colonies. The law forbidding a man to marry his deceased wife's sister is not Levitical, and, despite the annual effort to throw it off, remains in the home country, but has been dispensed with in Canada and Australia.

The Levitical code is followed generally in the various States of this nation, but New Hampshire, Ohio, and Indiana forbid the marriage of first-

cousins. Most States forbid a man to marry his aunt or niece, but it is permissible in New York.

Reliable statistics, free from flaws, are exceedingly difficult to procure. The best we can do is to gather all the reliable testimony obtainable.

George H. Darwin, who has so thoroughly studied the marriages between first-cousins in England, says: "It thus appears that in London, comprising all classes, the cousin marriages are about $1\frac{1}{2}$ per cent.; in urban districts, 2 per cent.; in rural districts, $2\frac{1}{4}$ per cent.; among the landed gentry, $3\frac{1}{2}$ per cent.; aristocracy, $4\frac{1}{2}$ per cent. An average for England of 3 per cent. The average for Scotland is $5\frac{1}{4}$ per cent. This large percentage leads Mr. Darwin to think that such marriages are more frequent in Scotland than in England and Wales. From the mountainous nature of the country this is, perhaps, to be expected. After a thorough search through the institutions for idiots, insane, deaf and dumb, etc., he found that between 3 and 4 per cent. of these descended from consanguineous marriages. In 366 families, in the urban districts other than London, concerning which accurate information could be obtained, 8 — that is to say nearly 2.2 per cent. — were the offspring of first-cousins. From his investigations Mr. Darwin had deduced 2 per cent. as the proportion of first-cousin marriages in these districts. Including 350 cases from Newcastle, concerning which the information is not so accurate, reduces this to 1.9 per cent. Probably 3 or 4 per cent. of the patients in the idiot and lunatic asylums are the offspring of first-cousins. Taking into consideration the inaccuracies of the modes of gaining information, both as to the number of these descending from consanguineous marriages and the percentage of these marriages — 3 per

cent.—the above can not be said to be in excess. As to deaf-mutes, the proportion of offspring of first-cousin marriages is precisely the same as the proportion of such marriages to the whole number of marriages. Therefore there is no evidence whatever of any ill-results accruing to the offspring from the cousinship of their parents.

Professor Mantagazza, M. Boudin, and Dr. Balley are of the opinion that consanguinity tends to sterility. After a most thorough investigation, making much use of Burke's "Landed Gentry," and "Peerage," Darwin finds that consanguineous marriages are slightly more fertile than the non-consanguineous. He thinks the cause of this is probably the fact that marriages between first-cousins will be more apt to take place where there is a large group of persons who bear that relationship to each other. In such families fertility will be hereditary. The alleged infertility of consanguineous marriages, whether direct or indirect, can not be substantiated. Mr. Darwin's investigations concerning the alleged death rate among the offspring of cousins, although rather meagre and unsatisfactory, tend to invalidate the allegation, yet there remains a shade of evidence that the death rate is slightly higher than among the families of non-consanguineous parents.

Dr. Crichton-Browne, of the West Riding Lunatic Asylum, England, says: "It has always seemed to me that the great danger attending such marriages consists in the intensification of the morbid constitutional tendencies which they favor. Hereditary diseases and cachexia are much more likely to be shared by cousins than by persons who are in no way related, and these are transmitted with more than double intensity when

common to both parents. Persons of similar temperaments ought not to marry."

Dr. Howden, of Montrose Lunatic Asylum, Scotland, says: "As regards insanity, my own opinion is, that unless there exists an hereditary predisposition, the marriage of cousins has no effect in producing it. * * * Neither in insanity, nor in any other abnormal propensity, do two plus two produce four; there is always another factor at work, neutralizing intensification and bringing things back to the normal."

Dr. Lauder Lindsay, Murray Royal Institution for the Insane, Perth, Scotland, is of the opinion that the ill effects of cousin marriages are much less, in regard to insanity, than represented.

Dr. Scott, of Exeter, says that 7 out of 241 families in which deaf and dumb children have been born were first-cousin marriages. In three or four of these families more than one child was so afflicted.

Dr. Arthur Hopper, of the Deaf and Dumb School at Birmingham, out of sixty-two congenitally deaf children, found not one to be the offspring of consanguineous marriages. He thinks it possible for deafness to show itself in future generations, though dormant now.

Mr. Neill, of the Northern Counties Institution, Newcastle-on-the-Tyne, says: "Three hundred and fifty have been admitted into the institution, and I think in not more than six cases were the parents cousins. In one family, whose parents were cousins, there were four deaf-mutes." Mr. Neill has been engaged in the tuition of the deaf and dumb for more than forty years. He thinks the offspring of cousins so affected fewer than supposed.

Mr. David Buxton, of Liverpool, thinks that one in ten of the deaf and dumb in his school descend from consanguineous marriages.

Mr. William Sleight, of the Brighton School, says: "As far as I have been able to ascertain, about 7 per cent. of the congenitally deaf children are the offspring of cousins."

Dr. George Wallington Grabham, Asylum for Idiots, Earleswood, says: "Consanguinity of parents accounts (partially only) for about 6 per cent. of the cases which have been admitted into the asylum during the last six years and a half. In 11 cases only out of 543, the parents were first-cousins, and no other cause could be obtained. Where hereditary predisposition coexists with marriage of consanguinity, we frequently find, as might be expected, more than one child affected. We may, therefore, regard with less disfavor marriages between cousins where there is no hereditary taint on either side."

Dr. Rayner, of the Hanwell Lunatic Asylum, reports 3 out of 255 as the offspring of cousins; Dr. Byewater Ward, of the Warneford, Oxford, Lunatic Asylum, none out of 20; Dr. Adam, Metropolitan District, Caterham, lunatics, 20 out of 560; Dr. Yellowless, Glamorgan County, lunatics, 9 out of 218; Dr. Lawrence, Chester County, lunatics, 3 out of 225; Dr. Mickle, Grove Hall, Bow, 8 out of 181; Dr. Oscar Woods, Hatton, Warwick, 8 out of 258; Dr. Grabham, Earleswood, Surrey, idiots, 53 out of 1,388; Dr. Orange, Broadmoore, lunatics, 2 out of 150; Dr. Gilchrist, Crichton Royal Institution, Dumfries, 4 out of 51; Dr. Anderson, Southern Counties, Dumfries, 8 out of 200; Dr. McIntosh, Perth District, Murthly, 3 out of 78; Mr. W. H. Warwick, Asylum for the Deaf and Dumb, Kent, 52 out of 632.

Dr. Arthur Mitchell, of Edinburgh, Department Commissioner of Lunacy in Scotland, has made a most thorough investigation of the subject in his paper, "Blood Relation in Marriage." (He found among 146 born from 45 consanguineous marriages, 37 of them being fertile, 5.5 per cent. idiots, 3.4 per cent. imbecile, 7.5 per cent. insane, 1.4 per cent. epileptic, 3 per cent. paralytic, 1.4 per cent. deaf-mutes, 2 per cent. blind, 15 per cent. consumptive, scrofulous, or manifestly weak in constitution.) He arrives at the following conclusion: Under favorable conditions of life the apparent ill effects were frequently almost *nil*; while if the children are underfed, badly housed and clothed, the evil might become very marked. He thinks the danger greater between uterine relatives than those having a common father, but different mothers, for two reasons: One because more good or evil is inherited from the mother; the other because, while we are always the sons of our mothers, yet we may not be the sons of our fathers.

Sir W. Wilde, in his appendix to "Aural Surgery," considers consanguinity of parents as a paramount cause of ear troubles in children.

Mayr found the following proportions of deaf and dumb, out of 10,000 persons, in various countries: In the Netherlands, 6.72; among Netherland Jews, 15.34; in Germany, 19.32; among Bavarian Jews, 36.47; in Baden, 24.24; in Prussia, 12.44.

Reich found deaf and dumb, out of 10,000 persons, as follows: Argentine Republic, 75.74; United States of North America, 8.39; British Australia, 5.65. He lays this to the fact that in the Argentine Republic the people are enervated and passive. In both other lands they are very active.

In Sweden consanguineous marriages are not more numerous than in North America, yet, from

the abuse of alcohol and other habits detrimental to the general system, the frequency of the deaf and dumb is 20.57 to 10,000 inhabitants. Falk also considers the social condition one of the weightiest tendencies to deafness and dumbness.

Boudin and others claim that the greater frequency of mental diseases among earls and the aristocracy is due to consanguineous marriages. It is probable that this is not so much more frequent among them than among other people, but it is more noticed. Then, too, why not lay it to debauchery, extravagance, and corruption?

Dr. Charles F. Withington, of Roxbury, Mass., read a paper before the Massachusetts Medical Society in 1885, in which he gave a collection of 108 consanguineous marriages; 103 were fertile, bearing 413 children. Excluding all those having defects of the slightest nature, 312 remained, being 75.5 per cent. This is as high a percentage, certainly, as can be found in any equal number of children taken at random. The defects present could not be ascribed positively to the consanguinity of the parents. They consisted of: Deaf-mutes, 12; insane, 7; idiots, 13; blind, 8; died of consumption, 15; nervous, 5; of less than average intelligence, 8; died in infancy, 16; not robust, 6; hermaphrodite, 1; died of meningitis, 2; cross-eyed, 2; still-born, 2; deaf (not congenital), 2; stammerers, 2; myopic, 2; deformed, 2; epileptic, 1; total, 101.

Of these 108 marriages fertility was present in all save 5. In one of these there was a mechanical impediment on the part of the wife; in another the marriage had lasted only two years. Three of these were physicians, and one a member of the Boston Tea Party, certainly very respectable members of Society.

The marriage of Jones and Jones, Brown and

Brown, Smith and Smith, probably means the marriage of distant relatives, though the parties themselves are not aware of it.

Dr. Bemis reported to the American Medical Association a collection of 843 consanguineous marriages, producing 3,942 children, 4.6 births per marriage; 28.7 per cent. are put down as defective; 3.6 per cent. as deaf-mutes; 2.1 per cent. as blind; 7 per cent. as idiots; 2.04 per cent. as insane; 1.5 per cent. as epileptic; 7.6 per cent. as scrofulous, and 2.4 per cent. as deformed; 22.4 per cent. are recorded as having died young.

M. Burgeois gives the history of his own family, descended from a consanguineous union in the seventeenth century. Sixty-eight marriages all feel the effects of consanguinity, yet only one was infertile, and this the fault of the wife, a woman of alien stock. The health of all the 200 descendants is excellent, except in one family, where scrofula has crept in.

Seguin gives the particulars of ten marriages of kin in his own family, two of the number being uncle with niece, and the rest of first-cousins. Sixty-one children were born, not one of whom showed deaf-mutism, hydrocephalus, stammering, or polydactylism. All lived to be grown up.

Dally gives a case of intermarriage between two families, all being first-cousins, save two, who were second-cousins. This has continued for five generations, with an average of three or four children per marriage. There has been no case of idiocy or deaf-mutism, and but one of insanity, in an old woman.

M. Voisan reports observations, in the isolated commune of Batz, of 46 consanguineous marriages. These gave 172 children. Sterility occurred in two instances. Mental disorders, idiocy, deaf-

mutism, hemeralopia, albinism, retinitis pigmentosa, or malformations, were all unknown. The community consisted of 3,300 souls. They were simple, intelligent, and moral, and had intermarried from time immemorial.

Dr. Cameron makes the statement, based upon the Irish census of 1881, that of the 5,136 deaf-mutes enumerated in the country, 135, or 2.6 per cent. were the children of first-cousins.

Dr. Derby, in a total of 12,130 cases in his ophthalmic practice, has met 23 cases of retinitis pigmentosa. Ten of these were the children of cousins. In none of the 23 cases were any other abnormalities noted. Dr. Derby also gives figures by other observers, which, together with his own just referred to, amount to 210 cases. In 70 there was relationship, in 139 no relationship, in 1 no information.

Dr. Standish, in the Carney Hospital, Boston, in a total of 3,726 patients, found 3 cases of retinitis pigmentosa. In 1 there was no record as to consanguinity, in 1 no relationship, in 1 the parents were first cousins.

Liebreich found retinitis pigmentosa and deaf-mutism closely connected. From investigations with the ophthalmoscope among the inhabitants of Berlin, he found deaf-mutism among the Catholics, who prohibit consanguineous marriages, 1 in 3,000; among Protestants, who permit, 1 in 2,000; among the Jews, who encourage, 1 in 400. According to Liebreich and data from Moorfields Hospital, the development of retinitis pigmentosa is favored by consanguineous marriages.

It will be seen that the testimony is British. Your essayist wrote to a number of British and American gentlemen connected with public institutions, asking for information. The British

answered, but the Americans did not. The latter probably did not have the information, or were too busy looking after their political fences to impart it. Your essayist is under many obligations to the gentlemen from England, Scotland, and Ireland.

CONCLUSIONS.

1. Like breeds like, good or bad, entirely independent of consanguinity.

2. Evil results have undoubtedly followed consanguineous marriages, but whether dependent upon consanguinity is extremely doubtful.

3. Intemperance, luxury, dissipation, sloth, and shiftlessness, as well as hygienic surroundings and innumerable other causes, among them the depraved moral state dependent on births the result of incest, should bear much of the responsibility laid at the door of consanguinity.

4. Testimony is often weakened by religious or other prejudices.

5. Data are of doubtful reliability, full of flaws and false reasoning. The noted cases are the unfortunate ones. The favorable are unknown or forgotten. It is the ill news which travels fast and far.

6. We as physicians know that there is much more illicit intercourse than is generally discovered. May not many people be related though not aware of it? Many marriages may thus occur between relatives presumed to be non-relatives, thus again vitiating statistics.

7. Statistics show about the same proportion of deaf-mutes, idiots, and insane persons, descendant from consanguineous marriages, to the whole number of those unfortunates, as the number of consanguineous marriages is to the whole number

of marriages. They show fertility among the consanguineous to be slightly greater than among non-consanguineous. They also show a somewhat greater frequency of retinitis pigmentosa.

8. Atavism explains fully the fact that in some instances healthy consanguineous parents beget unhealthy children. This, as is well known, occurs in most hereditary troubles. Furthermore, a less superficial examination may show this healthfulness to be only apparent.

9. Evil results in the offspring of consanguineous marriages prove that *something* is wrong. That it was the consanguinity has not been proven. It may have been one of a hundred things, and dependent on all of the antecedents for generations. Such results remaining absent after these marriages prove, for that case at least, that consanguinity was harmless, for it was known to be present. Further, if consanguinity was the cause, the effect should follow where the cause is present.

10. Consanguineous marriages which bring together persons having a disease or morbid tendency in common are dangerous to the offspring. Not, however, one whit more so than the marriage of any other two persons not related, yet having an equal amount of tendency to disease in common. Conditions present in both parents, good or bad, are simply augmented, and the result would have been the same were they not related.

11. Given, a malformation or disease firmly established, we have a tendency to breed true. Given, a defect or peculiarity in a family, race, or sect, this will naturally be propagated by intermarriage, *e. g.*, color-blindness is remarkably hereditary among the Jews and Quakers. The Quakers are educated to abhor color. Those who admire color separate themselves from the sect and

thus intensify the tendency in the remainder. The defect has probably crept among the Jews, and is kept up and intensified by intermarriage. The same means has also had its effect among the Quakers.

12. Certain inherited diseases — as scrofula, phthisis, and rachitis — which are ascribed to consanguineous marriages, probably in every instance, could be traced back to an ancestor.

13. Man is an animal, anatomically, physiologically, and sexually. He is subject to the same laws of propagation. In-and-in breeding in animals is carried on to an extent not only not permissible in the human species on moral grounds, but also beyond the bounds of human possibility. Yet this is done by cunning breeders to improve the stock and put money into their pockets. The Jersey cattle have been bred for the last hundred and fifty years on a small island, six by eleven miles. You would not raise them for beef or oxen, yet they command a high price for their milk and butter. This was probably the recommendation of the first cattle on the island, and this quality has improved from that time to this through in-and-in breeding.

14. It would be better for the offspring were consanguineous marriages under medical supervision. Certainly no better than for all marriages to be under like supervision.

15. The half a hundred abnormalities ascribed to consanguinity, including almost all the ills that flesh is heir to — among others, whooping-cough — approaches the ludicrous.

16. The factors which lead to consanguineous marriages are, portions of countries geographically isolated or mountainous, rendering communication with the outside world difficult; religious or political sects of an exclusive nature, and

aristocratic ideas. As examples, note the percentage of consanguineous marriages in Scotland, 5.25 per cent., to those in England, 3 per cent.; the preponderance in Martha's Vineyard, the commune of Batz, and among the Jews and Quakers.

17. The facts do not warrant us in supposing that there is a specific degenerative effect caused *ipso facto* by consanguinity.

18. Consanguineous marriages, no other objection being present, should not be opposed on physiological grounds.

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