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THE RELATIONSHIP OF

MARRIAGES OF CONSANGUINITY

TO

MENTAL UNSOUNDNESS.

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*(A Paper read August 11, 1886, before the Section of Psychology, British Medical Association Annual Meeting at Brighton.)*

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BY

G. E. SHUTTLEWORTH, B.A., M.D., &C.,

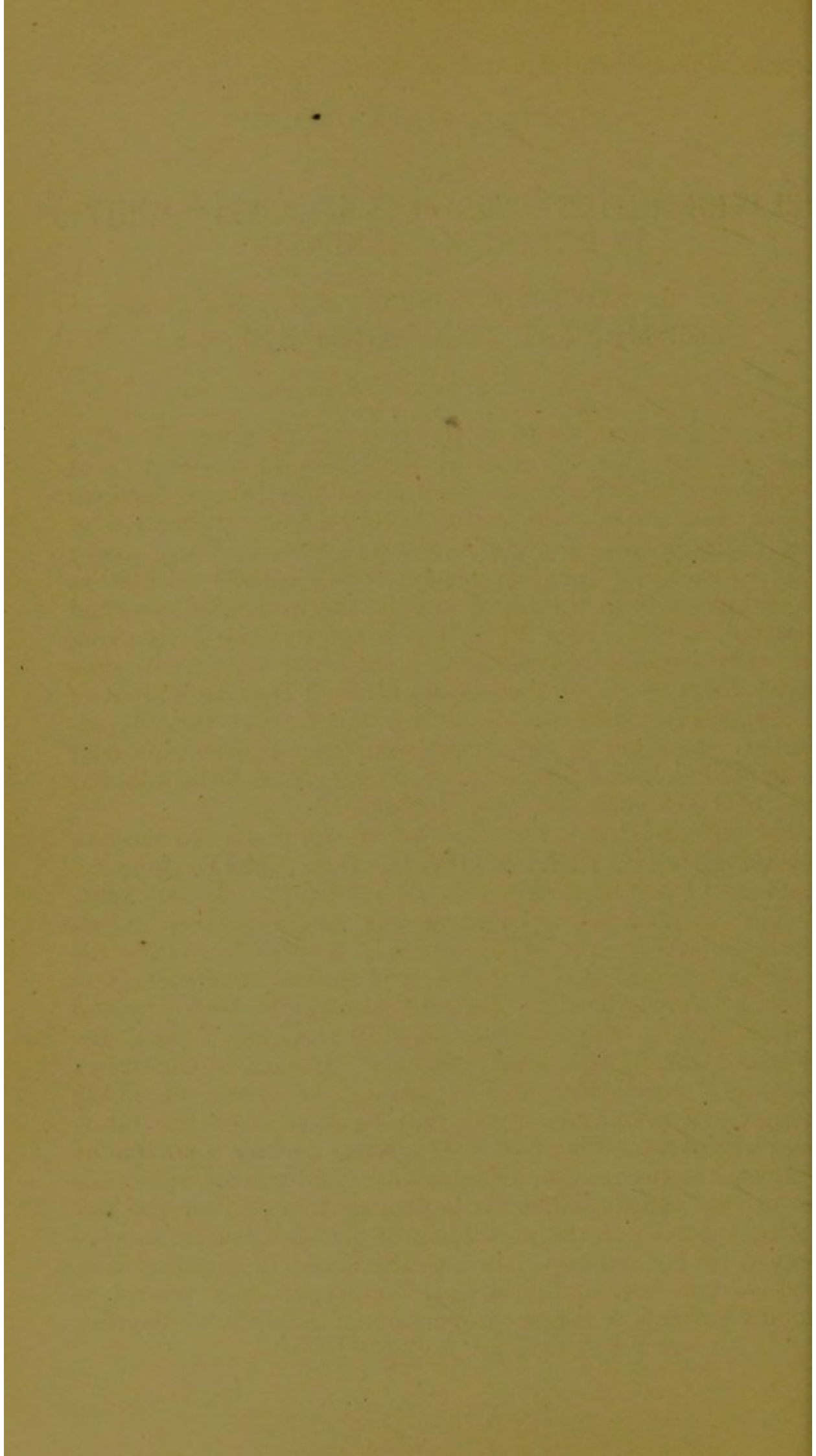
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THE  
RELATIONSHIP OF MARRIAGES OF CONSANGUINITY  
TO MENTAL UNSOUNDNESS.

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Med. Supt. Royal Albert Asylum, Lancaster.

(Read at Brit. Med. Assoc. Annual Meeting, 1886.)

The subject announced as the title of my paper is one I proposed last year for general discussion in the Section of Psychology at the Cardiff meeting of the British Medical Association. Time not having permitted the discussion of this topic on that occasion, I venture now to bring under your notice a few facts and figures which I have collected in an endeavour to form an opinion upon this much-controverted question. I fear I have little that is new to place before you, the only original contribution I can offer being statistics drawn from my experience as the Medical Superintendent of an Asylum for Imbecile Children; but I trust that by attracting attention to the subject some useful discussion may be elicited as to the principles of investigation to be adopted in a more extended and exact inquiry.

Not unfrequently I am asked for my opinion as to the risk attending the marriage of cousins, more particularly in reference to the risk of idiocy in the offspring. There exists, no doubt, in the public mind, as one sees evidenced by remarks in society and other journals, a misgiving as to the propriety of such marriages; and in medical literature also we find a disposition to attribute many evils, both physical and mental, to the intermarriage of relatives. Thus, Dr. Charles West, in his recent "Mother's Manual of Children's Diseases," states that "*First among the causes of sickly infancy and premature death may be mentioned the intermarriage of near relatives.*"\* Trousseau devotes a portion of a clinical lecture to a consideration "*des funestes influences des unions consanguines sur la propagation de l'espèce,*" insisting specially on the prevalency of deaf-mutism in the progeny of such marriages. On the other hand, high authorities, medical and lay, maintain that consanguineous marriages do not furnish a larger proportion of imperfect offspring

\* *Op. cit.*, p. 2.



than do other marriages, and the late Dr. Jarvis, of Massachusetts, even believed "that when the parents, though related, have both perfect constitutions, the offspring have a double security against imperfections." In his view the sole objection to consanguineous marriages lies "not in the fact of relationship of parents, but in the fear of their having similarly vitiated constitutions." In strong contrast to this is Devay's opinion, expressed in his "*Hygiène de Famille*,"\* to the following effect:—"We charge upon unions between relatives of the same stock the production, *by the sole fact of the non-renewal of blood*, of a specific cause of organic degeneration fatal to the propagation of the species."

Thus much to show the perplexing difference of opinion held upon the question. A cursory glance at the teachings of history may, perhaps, throw some light upon the subject. It is evident that in the early ages of the world no evil results were feared from the marriage of near kin. Abraham married his half-sister, Sarah, Isaac his first cousin once removed, and Jacob his first cousins, Leah and Rachel, without any known injurious consequences to offspring. As Jeremy Taylor has it, "The elder the times were, the more liberty there was of marrying kindred"; and, among the ancient Egyptians and Persians, marriages which we should regard as incestuous were contracted by members of royal and aristocratic houses with public approbation. Indeed, marriages of sons with mothers, or of fathers with daughters, seem to have been regarded with no disfavour by certain primitive races, if we may believe the words put into the mouth of Hermione by Euripides :

"Τοιοῦτο πᾶν τὸ βάρβαρον γένος  
πατήρ τε θυγατρὶ παῖς τε μητρὶ μίγνυται." †

Marriages such as these were, however, strictly prohibited to the Jews by the Mosaic law ; but amongst civilized peoples we nowhere hear of the prohibition of marriages between first cousins until the time of the Emperor Theodosius, in the fourth century. Under the influence, it would appear, of ecclesiastical advice, further restrictions were subsequently imposed upon marriages between relatives of more distant degree ; and at length the existence of blood-relationship within the seventh degree came to be considered by the Church as a bar to matrimony.‡ The removal by dispensation of such

\* 2nd Ed., p. 246.

† "*Androm.*," v. 173.

‡ Hallam's *Middle Ages*," Vol. ii, p. 294.



restrictions in particular cases became, in fact, a considerable source of revenue to ecclesiastics, so that it is perhaps not to be wondered at that the iniquity of consanguineous marriages was insisted on as a most important article of the faith. I cannot but think that even in "reformed" countries, like our own, the influence of ecclesiastical tradition has tended to mould public opinion on the matter quite as much as have physiological considerations.

It is, however, with the latter aspect of the question alone that we, as physicians, have to do. Approaching it from the standpoint of the naturalist, what do we learn from experience as regards the lower animals? In this case, as in that of man, some difference of opinion exists as to the effect of "in-and-in breeding"; but we shall hardly be wrong in saying that it is generally admitted that whilst this process intensifies *points*, it is in the long run inimical to vigour of constitution. Mr. Youatt, a great authority, writes that "it is the fact, however some may deny it, that strict confinement to one breed, however valuable or perfect, produces gradual deterioration." The selection of animals for in-breeding must, it is admitted on all hands, be made with great care, to the exclusion of animals with any known morbid tendency; and this sort of care is but too often sacrificed, in the assortment of human couples, to sympathy and sentiment, if not to sordid motives.

Herein, no doubt, lies the special danger of consanguineous marriages. As Dr. Clouston remarks ("Clinical Lectures," p. 623), there seems to be "a special tendency for members of *neurotic* families to intermarry, and an affective affinity amongst such that tends towards love and marriage;" and I think we may safely assume that cousin marriages are more frequently met with among neurotic than among perfectly healthy stock. In such cases, of course, heredity may be considered as an important factor in the event of any evil result. Then again, in mountainous and other secluded districts, where the population is, so to say, of stagnant habit, cousin marriages are likely to be comparatively frequent. Inasmuch as

"Home-keeping youth have ever homely wits,"

we must not be surprised if in the offspring the intellectual level occasionally falls to that of imbecility. Certain it is that the Census Report bears testimony to the "much greater comparative amount of idiocy and imbecility that



exists among the natives of agricultural counties, and especially of such agricultural counties as are also mountainous, than among the natives of manufacturing and mining counties."\* And as Dr. Mitchell tells us, "the influence of cousin marriages is more felt in producing imbecility and idiocy than in insanity acquired late in life."

Beyond this we unfortunately get no help in our inquiries from the Census Returns. In 1871 it was proposed by Sir J. Lubbock that a question should be inserted in the schedules with reference to cousin marriages, but it is to be regretted that the "proposal was rejected, amidst the scornful laughter of the House, on the ground that the idle curiosity of speculative philosophers was not to be gratified," at any rate by State aid. And I am not aware of any country where such an inquiry has been *satisfactorily* carried out.

In France, indeed, attempts have been made to obtain information as to the subsistence of relationship between the contracting parties to a marriage through inquiries at the Mairie at the time of registration. It would appear, however, that such inquiries have not been very systematically carried out, and very diverse conclusions have been arrived at as to the relative frequency of such marriages. Thus, M. Boudin reckons that only 0·9 per cent. of all marriages in France are between relations, 0·88 being between first cousins, whilst another return (quoted by Huth†) gives 1·28 per cent., and M. Dally contends that in Paris first-cousin marriages form 1·4 per cent. of all marriages. It would seem that M. Legöyt, chief of the statistical staff, estimated that throughout France first-cousin marriages form from  $2\frac{1}{2}$  to 3 per cent. of all marriages.‡

In England the frequency of such marriages is little more than a matter of conjecture. Many years ago Dr. Langdon Down stated the proportion of first-cousin marriages in London as not more than 0·5 per cent. of all marriages, calculating upon somewhat limited data; and Dr. A. Mitchell has estimated the proportion in Scotland at only 1·5 per cent. In 1875, Mr. George H. Darwin (son of the great naturalist) made a somewhat elaborate inquiry into the subject, based upon the number of "same-name" marriages, and by a series of careful mathematical processes he satisfied himself that in England the proportion of such

\* "Census of England and Wales," Vol. iv, p. 70, 1881.

† Huth, "Marriage of Near Kin," p. 206-211.

‡ G. H. Darwin, "Journ. Statistical Society," Sept. 1875, p. 347.



marriages (*i.e.*, marriages between first cousins) averages from  $1\frac{1}{2}$  per cent. in London to  $2\frac{1}{4}$  per cent. in the rural districts for all classes of society, rising somewhat higher in the higher social grades.\*

From these calculations and the further inference that the fertility of first-cousin marriages is not appreciably inferior to that of non-consanguineous marriages, Mr. Darwin goes on to argue that if the special population of idiot and lunatic asylums does not furnish a larger proportion of children of first-cousins than does the ordinary population (estimated by the number of consanguineous marriages), then no evils can be justly attributed to first-cousin marriages, so far as mental unsoundness is concerned. From information obtained from various British idiot and lunatic asylums, he ascertained that about 3.4 per cent. of the inmates ( $5\frac{1}{4}$  per cent. in Scotland) were supposed to be the children of first cousins.

These conclusions were based upon inquiries in the case of 4,308 patients whose history on this point was known. Special value is attributed to the returns from Earlswood Asylum, furnished by the then superintendent, Dr. Grabham, which set forth that out of 1,388 inmates, 53 were known to be children of first cousins.

In a paper published in the "British Medical Journal" (Jan., 1875) by Dr. Grabham himself, he states that "consanguinity of the parents accounts (partially only) for about 6 per cent. of the cases admitted (into Earlswood) during the last  $6\frac{1}{2}$  years. In 11 cases out of 543 the parents were first cousins, and no other cause could be ascertained." It would appear, therefore, from this and the preceding statement, that at Earlswood (during the period referred to) 3.8 per cent. of the patients were children of first cousins, and that in about 2 per cent. no other cause could be traced. As probably two or more children were in some cases the offspring of the same parents, the proportion of first-cousin marriages would be lower than the figures above given.

Dr. Langdon Down, in an interesting lecture published in the "London Hospital Reports for 1866,"† gives as his experience that out of 852 cases of known parentage, 60 were children of consanguineous marriages, being at the rate of about 7 per cent.; and among these 46 (or 5.4 per

\* "Journal of Statistical Society," June, 1875. ("1½ p.c. in London, 2 in urban, and 2¼ in rural districts," is the full statement.)

† p. 224, &c. (I follow Huth in the calculation of percentages.)



cent.) were children of first cousins. He goes on to show from a detailed examination of 20 unselected cases, that in 16 either insanity or phthisis existed in the family, and that in three others the presence of some parental debility was noted, so that it would appear that in only one was parental consanguinity the sole discoverable factor. He adds that the average number of children to a family, in this series of cases, was 6.9, and that 53 per cent. of the progeny were in fair mental and bodily health.

At the Royal Albert Asylum, Lancaster, we have notes of 1,076 cases. It is our custom invariably to ask, whenever there is opportunity, as to relationship or otherwise of parents, but in no less than 164 cases satisfactory information on this point has not been obtained. A few readmissions are included in the 1,076 cases, so that we may put down the number of patients of known parentage at the round figure of 900. Of these 52 are known to be children of consanguineous marriages; but as in six instances there are two children of the same parents, the number of consanguineous marriages is 46. Of these 26 are the marriages of first cousins, 3 of first cousins once removed, 10 in which the grand-parents were cousins, and 7 in which other degrees of consanguinity existed. We may conclude, then, that these Case Books furnish, in the parental history of 100 imbeciles, 5.1 per cent. of consanguineous marriages and (included in these) 2.9 per cent. of first-cousin marriages. In five families the existence of other imbecile children not in the Institution has been noted, and it would appear that the average number of children to a family—the offspring of consanguineous marriages—is not less than five. In the case of the 26 first-cousin marriages, some other possible factor of idiocy is known to exist in 16.

I have no doubt much valuable information exists which I have not been able to cite here with regard to the present inmates of English imbecile institutions; but taking such statistics as I have been able to refer to, let us consider in what direction they point. Though our data are comparatively limited, there seems to be a certain concurrence in the independent inquiries referred to which will justify us in estimating the frequency of first-cousin marriages in the parental history of the inmates of English idiot asylums at from 3 to 5 per cent. If, therefore, Professor Darwin's estimate of the frequency of such marriages amongst the ordinary population is to be relied on (*i.e.*, ranging from



1½ to 2¼ per cent.), I think we may fairly conclude that *first-cousin* marriages (at any rate) are to some extent favourable to the production of idiot children. I am aware that this conclusion is not in accord with that of Mr. Darwin himself, who, whilst stating that from 3 to 4 per cent. of our asylum population are probably the offspring of first cousins, does not recognize that this is much in excess of the percentage of first-cousin marriages throughout the population generally. His statement that "probably 3 per cent. is a superior limit for the whole population" seems to me to raise too high a standard for comparison of averages obtained from Institutions most of whose inmates belong to the lower social grades.

We must, however, temper our purely statistical conclusions by such consideration of the facts of each case as may bring to light concurrent factors. In nearly all Dr. Down's cases, and in nearly two-thirds of my own, causes for idiocy were discovered, in addition to the consanguinity of parents, which would have been accepted as operative causes had no consanguinity existed. It is doubtless the case that morbid heredity, and especially mental morbid heredity, is likely to be intensified in the offspring of cousins; and, as Sir J. Crichton Browne has remarked, it is possible that "even healthy temperaments, when common to both parents, often come out as decided cachexiæ in the children."\* I regret that the time at disposal does not permit me to refer to the admirable researches of Dr. Arthur Mitchell, C.B., upon the subject of consanguineous marriages in Scotland;† but his observation that "under favourable conditions of life, the apparent ill effects of consanguineous marriages were frequently almost *nil*, whilst if the children were ill-fed, badly housed and clothed, the evil might become very marked," will, I think, explain some apparent anomalies in our experience of this matter. On the whole, in these latter ages of the world's history, when so few families can show a lineage physiologically faultless, a "caveat" may almost always be entered against the marriage of cousins; at the same time, if a close scrutiny does not reveal any heritable weakness, neurotic or otherwise, I do not know that the facts and figures I have cited will justify us in invariably "forbidding the banns."

\* Quoted by Darwin, "Journ. Statistical Society," June, 1875, p. 168.

† "Edin. Med. Journ.," March, April, June, 1865.



P.S.—The limit of time prescribed for reading this paper precluded my citing American statistics bearing upon this subject. It would appear, however, that in Massachusetts\* Dr. S. G. Howe found consanguinity to exist in 20 marriages out of 359 producing idiots, equivalent to about 5.5 per cent.; and the Report of the Connecticut Commissioners shows a percentage of about 6.5 per cent. of consanguineous marriages in the parentage of idiots, "in whose cases an adequate cause was reported;" nearly 4 per cent. being children of first-cousins.† Mrs. C. W. Brown reports that of 225 idiots and imbeciles at Barre, eight, perhaps others, were children of first-cousins; the first-cousin marriages standing at about three per cent.‡ In Dr. I. N. Kerlin's admirable etiological investigation of 100 cases, it is stated that seven were children of consanguineous stock, two being children of first-cousin marriages.§ In Dr. A. C. Rogers' experience at the Iowa Institution it would seem that kinship of parents has been noted 25 times in the history of 500 cases,|| equal to five per cent. On the whole it would appear that American statistics run parallel with those of the English Institutions, and that not more than six per cent. of the imbeciles in American Institutions are known to be the offspring of consanguineous marriages, amongst which first-cousin marriages may perhaps be estimated at three per cent.

In the Massachusetts report previously cited, Dr. Howe remarks that his inquiries "would show that more than one-twentieth of the idiots examined are offspring of the marriage of relations. Now as marriages between near relations are by no means in the ratio of one to twenty, nor are even perhaps as one to a thousand to the marriages between persons not related, it follows that the proportion of idiotic progeny is vastly greater in the former than in the latter case." On the other hand, a paper recently read before the Massachusetts Medical Society by Dr. Chas. F. Withington,¶ in which are tabulated the results of 108 consanguineous marriages—the percentage of idiocy and of insanity amongst the 413 children being 3.1 and 1.7 respectively—upholds the view that morbid inheritance, rather than specific degenerative tendencies, will account for all infirmities met with in the offspring of cousins.

\* "Supplement to Report on Idiocy" (Mass.), 1848, p. 89.

† "Report Connecticut Commissioners on Idiocy," p. 34.

‡ "Proceedings Officers American Institutions," 1879, p. 57-59.

§ *Id.*, 1880, p. 150-63.

|| *Id.*, 1886, p. 301.

¶ "Trans. Mass. Med. Society," Vol. xiii, No. 4 (1885).



and very interesting light is thrown on the old question of marriage between first cousins. A letter from Mr. BASIL THOMSON in the "Times." Mr. THOMSON has lived in Fiji and was a member of a Census Commission. One of the questions investigated was cousin-marriage. It appears that in the Fijian islands every man of a certain rank is to choose his wife from among the daughters of his mother's brother, and elsewhere cousin-marriage appears to be common. On the other hand, marriage between first cousins who are the offspring of two brothers or two sisters is regarded as incestuous. The Commissioners found that cousin-marriage of the first kind produced more children than ordinary marriages, while the offspring of cousin-marriages of the second kind rarely survived infancy. Mr. THOMSON says it is possible that the Fijians have learned from an obscure fact in physiology—that there is a physical fitness in the marriage of the children of a brother and sister respectively, and that the marriage of cousins who are respectively the children of two brothers or two sisters is disastrous to the physique of their offspring. "It is of course impossible to prove the existence of any such natural law in England or any other European country, as statistics are not available; but Mr. THOMSON declares that in Fiji cousin-marriages with which he is personally acquainted in this country the Fijian law seems to be in good accord, and Mr. STEEL, the Anglo-Indian Commissioner, has informed him that marriage between first cousins prevails among the Brahmans under the same laws and limitations as in Fiji. If there is any truth in this theory, it will help to elucidate a question hitherto exceedingly obscure. There is no doubt that where there is hereditary disease in the family, such as lunacy or consumption, the marriage of first cousins is highly dangerous. But where there is no such hereditary taint the prohibition appears contradictory or doubtful. Is it not true that in all the successful cases there is an alternation of sexes demanded by the law, and that in the unsuccessful ones there is no such alternation? In that case the conclusion is obvious enough. A man should not think of marrying his first cousin if she is the daughter of his father's brother or of his father's sister; but if she is the daughter of his mother's brother or of his mother's sister the prohibition would appear to justify his marriage."



