

A CONTRIBUTION  
TO THE  
NATURAL HISTORY  
OF  
HEREDITARY TRANSMISSION.

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IN this case I have been able to trace the history of a palpable defect through five generations, with absolute certainty as to the correctness of the facts. I have, therefore, thought it worth presenting to the Society, although its value can be only that of one brick in a building; and I do not propose to draw any conclusions from such limited premises, but simply to point out what are the leading peculiarities of the case.

In order to make these clear, at a glance, I have drawn up a genealogical tree of the five generations, and have procured photographs of the transmitted deformity.

This transmitted defect is thus described in a letter from one of the members of the family in which it exists. "We are accustomed to call our hands double jointed, because all the joints of the fingers are thick. Another characteristic is that the ring and little fingers are very crooked from the last joint. . . . The peculiarity is distinguishable at

birth. . . . We think the joints have become less in size in the present generation, and, often, it is only the middle finger, the joints of which are very thick ; but the ring and little fingers of both hands are as crooked now as they were four generations ago. Our forefathers were men of respectable lives and independent fortune, not engaged, therefore, in any special manual occupations.”<sup>1</sup>

It has been observed by the family that those children who inherit the deformity from the father, have it in the more marked degree ; those who inherit it from the mother have it in the less marked degree.

No drawing is preserved of the hand of Mary P—e, the first person in the history, and we do not know whether the more or less degree of deformity existed in her case. Neither is it known whether Mary P—e inherited the hand from her father or from her mother. It is known that some of her brothers and some of her sisters had deformed hands, and that some of her brothers and some of her sisters had perfect hands ; one of her sisters with perfect hands married into a well-known aristocratic family, and her descendants have all had perfect hands.

There has never occurred an instance in which the deformed hands have appeared in the children of parents whose hands were perfect, and thus the defect once lost has, apparently, been lost for ever. An example of this is given in the tree in the case of Anne W—r, who had perfect hands, and both her children and grand-children had perfect hands also.

The next point of significance, and perhaps the most interesting, may be observed in the fourth and fifth generations. A marriage occurred between Amelia G—r, who inherited the deformed hands in the *more marked degree*, and her first cousin, William G—tte, who inherited them

<sup>1</sup> Three photographs were exhibited :—1. The typical hand taken from the writer of the letter quoted. 2. The hand of Eleanor G—tte (the fourth generation), showing the deformity in its *less marked degree*. 3. The hand of Amelia G—r, showing the deformity in its *more marked degree*.



in the *less marked degree*. They have had two children, both of whom have perfect hands. These children are still very young, so that it remains to be seen whether the deformity will appear in any future children that may be born to these parents, or whether it will appear in these children as they grow older, or whether it has become extinct in this branch of the family.

At present, no other members of the fourth generation have married.

The last points for remark are—1st, that the deformity has affected males and females indiscriminately; and, 2nd, that in some cases the children with deformed hands have been the elder in the family, in some the younger; no rule in this respect having been observed.