

of Germany are well known, the family for nearly two hundred years having always members with twelve fingers. What is remarkable, amputation of the abnormal fingers does not diminish the tendency of the family to the deformity. Particular habits and tastes prevail in families which cannot be accounted for on the ground of imitation or example. A child may be removed at an early age from the influence of example, yet will develop peculiar tastes and habits, although the change may modify these peculiarities somewhat. One or two examples will suffice. (As before stated, I am arguing from the lower to the higher; that is to say, I am illustrating my case from examples in the lower creation, feeling sure the reader will see the connection existing between the two.) The writer knew an Irish setter dog which was removed from its mother when six days' old and carried away a distance of a few miles. As the dog grew up, it had no chance of seeing other setters, yet it developed all the peculiar habits of the old setter *without any training*. Grant that the pup inherited the sensitive olfactory by which game could be perceived at a great distance, this does not account for the development of the valuable qualities of a sporting dog. If the dog's master left the house without his gun the dog remained quiet; but nothing could restrain the dog if he perceived the gun with his master. He was known to leap through the thick glass of a window to follow him.

The following is vouched for by a writer in the *Atlantic Monthly*:—A cat had been in the habit for years of sitting on her master's shoulder the moment he sat down to dinner. A kitten of this cat, a few days old, was carried in the pocket a distance of twenty miles; as it grew up, without the slightest training, it followed the same peculiar habit. The beaver carries his mechanical habits with him to the Zoological Gardens, where there seems no need for them. The race-horse scarcely needs training. Habits and tastes are a heritage which may be controlled and modified by what Joseph Cook calls "environments," more easily than physical peculiarities. The children of soldiers are marked by their erect carriage and manner, even when removed from the environments of the barracks. But not only are physical deformities transmitted, but more surely diseases particularly of an organic nature. Examples are so numerous that it seems unnecessary to allude to them. Consumption, Scrofula, Gout, and Rheumatism are so hereditary that almost the first question of the physician to his patient is to ascertain the health of his ancestry. It is quite true these diseases do not appear in children whose parents have died from their effects. The tendency is there, and if the vital energy is lowered by any means, disease appears in that form for which there is a tendency. The health and vitality of one parent may modify for a time the tendency to disease until the vital energy is lowered. Cases of these diseases appearing which cannot be traced to hereditary tendency are very rare.

At Tracadie the child of a leper may be apparently free from all trace of the disease, but the next generation will be hideous lepers. Even two generations may be skipped. It is a mistake to suppose that the disease is lessened in virulence by slumbering during one or two generations. On the contrary, the disease seems to have accumulated force, like the cumulative power of colchicum or digitalis. The disease of leprosy seems never to die out. A young Canadian woman was lately sent from Providence to Tracadie with leprosy, whose grand-parents had been in the Lazaretto, on the Miramichi, N.B.

The question arises, then, Can we not overcome this inherited tendency to disease? and the answer is, Most certainly. It is the duty of every one to avoid every tendency toward the inherited disease. For example, in the case of consumptive inheritance, it is manifestly one's duty to be careful of diet. As the disease has its origin in a want of power in the system to assimilate food, the most assimilative food should be used, such as cream, milk, fats, oils, &c. All extremes of exposure should be avoided; sleep in well ventilated rooms is indispensable. So with every disease to which we have a tendency, great care should be used to sustain the vital energy. Excess in food or stimulants must be avoided.

Under the head of *Physical Heredity* alcoholism must be classed, as it seems dependent more upon physical conditions than on the moral sentiments. The most certain inheritance transmitted is that of habitual drunkenness. Every reader of these lines will call to mind families who for generations have been drunkards. The question is, Is a man responsible for such an inheritance? In the case of the drunkard the remedy is simple, "*never drink*," and the heritage will be harmless. It is a tendency so easily aroused that it is like carrying dynamite in one's pocket in the midst of fire. If the consequences of drinking to excess could ever deter men from indulgence, then the fact that they start a fire in their veins which will be transmitted to future generations now slumbering, only to burst out with uncontrollable fury, destroying its victims, or leaving them wrecks of humanity to continue the race of drunkards, should influence them to avoid the very taste.

Turning to *Mental Heredity*, it is as marked as *Physical Heredity*. Intellectual giants have borne simpletons for children. This is due to the excessive cultivation of the intellect and to the neglect of the physical organization. Hence there is a want of balance. It is true that mental qualities are transmitted. Generation after generation of ministers, barristers and doctors have been known. Space does not permit the enumeration of well known families illustrious in their several professions. The science of mathematics has been known to run in families for ages.

In the case of Arts, where skill in handwork as well as mental power are called into play, the inheritance is very distinct. We find among the humbler classes oftentimes good taste and skill in art, and if we turn back we find that some artist has infused this skill into the generation. The question was asked respecting a giant in intellect, how a man of such culture and such a thorough gentleman could spring from such parentage as a humble farmer of New Hampshire with bucolic manner and tastes. The grandfather proved to be a clergyman of most exalted intellect, of polished manners, and of great culture, living in a small village. It is said it requires three generations of cultured "environments" to evolve a true gentleman from a plebeian origin; so also gentlemanly traits crop out in degenerate descendants of three generations. Mental characteristics are transmitted. A tendency to dispute and self-assertion, which leads to litigation, often shows itself in families and characterises them for generations.

Insanity is one of the most remarkable heritances, and is perhaps more certain of transmission than any other trait. Statistics show the inheritance of insanity to be invariable; that is, if insanity appears, in most cases it has been transmitted. For generations upon generations there are families who have always had an inmate in the asylum, or, if not, they ought to have been there. Is there no help for this dread disease? Must we accept our fate of a living death without any hope or relief? By no means. All tendency to excitement—all disposition to worry—to jealousy of friends—to eager pursuit of wealth—to ambition, and to self-indulgence—should be carefully avoided; while self-control should be the great aim of one's life and active interest in the welfare of humanity. In this way transmitted insanity may be avoided. Intermarriage with those of healthy constitution and sound mind may also have a tendency to break the chain of inheritance. The doctrine of "counterparts" in marriage has great advantages; the "natural selection" of our opposites has a tendency to a heritage of well-balanced progeny, both physical and mental.

*Moral Heredity.*—The Bible teaches that we are "born in sin and shapen in iniquity." That however holy and pure our parents may be, there is a natural tendency to evil in every human being is admitted. This tendency may be overcome by judicious training and good example, and the child, when old enough to understand its relations to God, may by divine influence become virtuous and love that which is good and holy, and abhor that which is evil. The question is, Will the child of a saint and a criminal enter life with the same tendencies, providing the environments are precisely the same? Is there an inheritance of crime? Does a criminal father, possessing the same physical organization as a virtuous man, transmit criminal tendencies to his offspring? If we examine the records of prisons, we find that crimes, the result of pauperism and idleness—such as theft, drunkenness and debauchery—are committed by the children of paupers and the idle, while those crimes requiring skill, planning, combination—such as burglary, forgery, swindling, &c.—are committed by those who have had the advantage of education, but have inherited this tendency to crime from parents of loose morals and without principle.

In every community we find educated families who generation after generation have always had criminals among them. Crime does not always present itself in the same form, but it nevertheless appears. We see side by side with the legitimate family, again and again, illegitimate offspring. A family is known to the writer which for generations have had a member in the penitentiary. Family feuds, which are transmitted from father to child, depend as much upon inherited tendency to quarrel as upon the traditions of hate and bitterness. What is it the thief transmits to his offspring? Cunning to plan, and skill and cleverness to execute the theft. Said a notorious pick-pocket to a lady in this city, who reflected upon her character, "If I am a pick-pocket I came by it naturally, for both my father and mother were thieves, but I have never been convicted of the crime," and while talking thus, skilfully extracted the lady's purse without discovery. Cruelty and the disposition to quarrel, which leads to the crime of assault, may be traced in families. Such a family have always been bullies, is a remark often made.

The most striking illustration of the criminal heredity is the Jukes family, inhabiting a district in New York State, which has been called the "cradle of crime." The descendants of one vile woman, numbering several hundred, were nearly all criminals of the worst sort. By intermarriage and harlotry, criminal tendencies were transmitted, so that an honest man was the exception among the descendants, and this exception was caused by the removal of the child from the atmosphere of crime at an early age, and his being placed under good influences. Atheism and infidelity often run in families. Are all criminals the offspring of criminals; by no means, there are too many examples of criminals the sons of good men; this must be said that either tendency to crime has cropped out in the second or third generation, like hereditary disease suppressed and overcome by infused vitality by marriage, yet still being in the race, makes its appearance when the vitality is lowered, or else the training has been neglected. There is a New England proverb, "That ministers' sons and deacons' daughters oftenest go astray." This, however, is a great fallacy, for very minute and careful statistics being taken of families of the ministers of a large district, comprising over a thousand families, it was found that 90 per cent. were not only respectable members of society, but the vast majority occupied prominent places of trust, enjoying the respect of the community. The habit of self-control, the temperate and sober life, the religious and moral character indispensable to the minister, are those qualities which are most surely transmitted. If these physical, mental and moral qualities are hereditary, and the characters of children are dependent upon parents, either by inheritance or environment, then a great responsibility rests upon them lest by want of control of the appetite, of temper, of mind, or indulgence in excesses of any kind, they transmit to the generation following the seeds of vice and misery. This view of the subject of inheritance renders apparent the great value and usefulness of the noble and praiseworthy efforts of Miss Rye, Miss McPherson, and other ladies, who rescue the children of crime from the atmosphere of vice in the cities of Britain, and remove them to homes of health and comfort and moral environments in this country; thus cutting off an inheritance which would have rendered them a curse to themselves and to their native land. In this blessed work all those are engaged who devote their time and means to the judicious management of orphan asylums and homes for neglected children. If any receive the "Well done"; "inasmuch as ye have done it unto the least of these my brethren, ye have done it unto me," it will be those who rescue helpless infancy from the evil influences which render them a burden to the State, and transform them into good citizens and useful members of society. It is for these reasons that such institutions should receive the generous support of the State and the benevolent aid of every lover of humanity.

S. J. L.

*MOUTH*,—a useless instrument to some people, in its capacity, by the organs of speech, of rendering ideas audible; but of special service to them in its other capacity, of rendering visuals invisible.

"It is not the cares of to-day, but the cares of to-morrow that weigh a man down. For the day we have the corresponding strength given; for the morrow we are told to trust, it is not ours yet."—George MacDonald.