Heredity.

If doctors had time to preach sermons, there can be little doubt that they would insist strenuously on the wider recognition of the fundamental doctrine that underlies and directs all evolution, human, and otherwise, the law of heredity. They would teach that "the sins of the fathers are visited on the children," not in the angry vindictiveness of an irresponsible deity, but in the inevitable process of the law of generation. That law is, to a great extent, a mystery. The most unimaginative physiologists must sometimes stop to think when he reflects that from the embryonic vesicle, formed by the union of two simple cells, lies in place all the powers and passions, the merits and defects, the beauty or deformity of the parents. In no human being do we ever see the perfect combination of the qualities of both father and mother; the influence of one or other always preponderates, but that of the other is latent, as may be inferred from the fact that at one period of life a child may resemble his father, while at another the mother's characteristics come to the front. The "family likeness" of which we speak so lightly, extending as it does far beyond form and feature, is one of the greatest mysteries in creation, and makes anyone who reflects on the subject feel at once an awful helplessness in face of the frequent contest of inherited tendencies that goes on in every fibre of his being, and an intense determination to guide these tendencies in such a fashion that it shall not be the worst of them that will descend unimpaired or strengthened to unborn generations. To use the language of the old theologians, who often perceived a truth even where they were most rash in expression, in heredity the doctrines of predestination and freewill are confounded. A man inherits from father and mother a legacy of qualities, good and evil, of inherited tendencies to certain diseases and immunity from others, as surely as he inherits their money or their debts; with this difference, that no human power can set aside or alter the bequest. Only he himself can choose, and by his will decide—but then strength or weakness of will is itself an inheritance—which qualities he will strive to dissipate and which to put out to use.

Heredity may be of many kinds. The commonest is direct heredity, in which qualities pass from father to son, or, more frequently in a diagonal line, from father to daughter, and mother to son. Of course, the transmission is rarely complete. A girl may have her mother's face and her father's temper, or vice versa. The combinations and variations are as endless as those of a kaleidoscope, and yet in all a marked type will predominate, which sets the family apart from every other. Atavism, or reversion to an ancestral type, is by no means uncommon, and in close connection with it is indirect heredity, in which a child resembles an uncle or cousin, or some other relative out of the line of direct descent. This is, in fact, only a rever- sion to some ancestral type common to both, and often too remote to be recognised.

In families that have attained distinction of one kind or another, we can note the permanence of certain characteristics. The Guises were bold, rash, and proud, yet marked by a certain charm of manner that won them power over men, and often gained forgiveness for their crimes. These qualities they did not transmit only in their own line, but passed on, through Mary of Lorraine, to the faithful, im- petuous, fascinating Stuarts, who, like the Bourbon, "learned nothing and forgot nothing" through defeat and adversity. In other departments we see the influence of heredity in such families of statesmen as the Medicis, the Pitts, and the Pels. In science, no more notable example could be found than the Darwins, while in music the Bachs, and in art the three generations of Vernets are pre-eminent.

Among physical characteristics may be mentioned the numerous diseases that "run in families." A hereditary predisposition to gout is supposed to be rather respectable than otherwise, presumably as implying wealth to spend on good living, though when the diathesis is firmly established in a family, it will come out in circumstances of poverty and hardship. Other diseases are equally hereditary. Paffitius or specially English disease, often carries off whole families. In other ailments, such as epilepsy and insanity, only one member of a family may inherit the taint—may become, as it were, the scapegoat of the rest. In all these, the predisposition may miss a generation, or even two; but will recur with unfailing certainty at last. Sex also affects heredity. Men are more liable to acute inflammatory attacks than women, who, on the other hand, are specially subject to nervous affections. The same constitution which causes a man to be cut off in his prime of life may allow his daughter to reach old age, subject only to a certain lack of tone. She will be one of those "creaking doors that hang long on the hinge," unless some accident brings an extra burden to be borne by the particular organ that inherits the weakness.

With careful treatment the health may improve, the hereditary predisposition be lessened. For, as a rule, it is only a predisposition that is inherited, though children have been born with heart or liver disease already established, and if the mothers have suffered from any epidemic disease, such as scarlet fever or smallpox, the infants are affected by it. Even stranger cases have been known, where the disease has passed the mother, and fixed on the unborn child. Such instances are not exact examples of heredity, except in as far as they show that a parent, without being personally affected, may transmit disease to offspring.

Where, however, only a tendency, not an established disease, has been inherited, careful choice of occupation and residence may do much to eradicate it. We recall the case of two brothers, in whom a hereditary tendency to tuber- cular disease appeared in the form of atavism. They themselves were free from it, but their mother had died of consumption, and the taint appeared again in the children of each. After losing one child, the older brother, wise in time, removed his whole family to Australia, where their health has steadily improved. The other remained at home, and now, of seven children, only one daughter survives, and her health is a constant cause of anxiety. The diseases which have carried off the others have not all been the same, but they may all be traced to the tubercular diathesis, modified to different forms by age, sex, and circumstances of life.

It is indeed rather rash to say that any one disease is strictly hereditary. It is rather the predisposition than the ailment that is inherited, and this comes out in different forms, according as the individual is exposed to infection in youth, manhood, or maturer age. In many cases the disease may take a mental form in one member of a family and a physical form in another. It is true, of course, that insanity is usually a result of some physical lesion, and may even be cured by means of cranial surgery; but it is convenient to define as mental disease that in which the only symptom is some imperfection in the functions of the brain. Thus one individ- ual may be mad, while his sister, though perfectly sane, may suffer from cancer or scrofula. This may result from two morbid taints being inherited from different ancestors, or it may be the same taint taking different forms under different circumstances.

It is often asked if cancer is hereditary. On this point
authorities differ greatly. The general belief is that only a general taint is inherited, which may remain in abeyance or be developed by circumstances; but when one hears of a case like that recorded by Dr. Green, of a lady who was the fifth of her family to suffer from cancer within two generations, one cannot but think that the disease itself is derived from an ancestor. Instances such as these could be quoted in number from Dr. Lithgow's interesting book, on which our remarks are largely founded.

On the side of morals heredity is equally marked. Indeed, it cannot but raise in our minds a question as to the absolute responsibility of any human being. The inherited vices of our ancestors may conquer the aspirations of our better nature. On the other hand, a legacy of pure instincts may save us from the fires of temptation. In face of this we may punish, but we dare not reprove, our erring brother. We have not fallen into the same pit as he; but God alone can judge if, according to our circumstances and opportunities, we have not erred as grievously, and we must needs remind ourselves of the plea of the poet:

"Then at the balance let's be mute,
We never can adjust.
What's done we partly may compute,
We know not what's resisted."

**AMUSEMENTS AND RELAXATION.**

Word Competition.

**COMMEMORATED APRIL 6TH, ENDS JUNE 29TH.**

Three Prizes of 1s., 10s., 5s., will be given for the largest number of words derived from the words set for dissection, and addressed to the Editor. Proper names, abbreviations, foreign words, words of less than four letters, and repetitions are barred; plurals, and past and present-participle tenses, are allowed. Names of standard dictionary only to be used.

**N.B.**—Word dissections must be sent in WEEKLY, arranged alphabetically, with correct total affixed. The word for dissection for this, the Eighth week of the quarter, being

**ROSE BERRY**.

**Results of Sixth Week.**

| Name       | Total     |
|------------|-----------|
| Nurse Duty | 409       |
| Scrooge    | 439       |
| Castle     | 497       |
| Leaviston  | 498       |
| Chester    | 498       |
| Springer   | 498       |
| Amicus     | 498       |
| Scratcher  | 497       |
| Jenkins    | 497       |
| Concours   | 497       |
| J. J. S.   | 497       |
| Rosamond  | 497       |
| Percy      | 497       |

**Notice to all Correspondents.**

N.B.—All letters referring to this paper must arrive not later than 1292 and 140, Salisbury-court, London, E.C., by the first post on Thursday, and are not addressed PRIZE EDITOR, will in future be disqualified and disregarded.

**Conditions.**

1. Every paper sent must be clearly written, and one side only must be used. A sheet of paper may be added if the writer does not desire to be referred to by his real name. In the case of all prize-winners, however, the real name of the competitor will be published.

2. All communications relating to prize competitions should be addressed to "The Prize Editor, The Hospital, 1292 and 140, Salisbury-court, E.C. Competitors are requested to include in their letters, etc., to the Prize Editor communications on matters of other business. All communications must be sent in not later than 1292 and 140, Salisbury-court, E.C.

3. The Prize Editor of The Hospital is the sole judge of the competitions, and his decision is in all cases final and without appeal.

4. The Prize Editor reserves the right to publish any paper sent, in whatever it receives a prize or not. He does not hold himself responsible for any MSS. sent, nor can he undertake to return rejected competitions.

**SCRAPS AND GLENCHEMS.**

The Lord Mayor visited the Pasture Institute while at Paris. Surgeon Martin Gayford died lately at Kathgodam from cholera. W. E. Wynter has been appointed registrar of Middleton Hospital. The late Alderman Goldschmidt has left £100 to the Manchester Royal Eye Hospital. M. Pasteur will deliver the Croonian lecture on June 22nd, if his health permits. Effort is being made to open a cottage hospital at Shanklin for the cure of consumption. Dr. Murphy, of Worcester, has been presented with a writing table by his Sabbath school pupils. Messrs. Barraud, of Oxford-street, have published three photographs of the late Father Damien. The Rev. J. J. Sulkowsky, who escaped from a lunatic asylum near Vienna, has been recaptured. Henri Jubilee Cottage Hospital will be opened by the Duke of Richmond and Gordon in September next. M. Pasteur will deliver the Croonian lecture on June 22nd, if his health permits.

The West Ham and South Essex Dispensary issues a satisfactory report. The Gothards' Company is particularly generous to this charity. Mrs. Scharler, M.D., received her medical degree at London University last week, being the first woman who has achieved this triumph.

Mr. Edward H. Hill, B.A., Cantab., M.R.C.S., L.S.A., has been appointed house surgeon at Richmond Hospital, vice Mr. Peller, resigned.

The Queen sent a message, in which she wished success to the Mission to Deep-Sea Fishermen, on the occasion of the May meeting in support of that mission.

Spender needs a cottage hospital. A child was terribly injured there by a roundabout lately and had to be taken to Newcastle, a distance of twenty miles.

The death is announced of Lord Sydney Godolphin Osborne, whose pamphlet of "The Hospitals of Scullar" received much notice at the close of the Crimean War.

The late Mrs. Sargent, daughter of O. W. Holmes, has left £2,000 to the anatomical department of Harvard College, and £1,000 to the Massachusets General Hospital.

Dr. Paget, second surviving son of Sir George E. Paget, has been appointed medical officer of health for Walthamstow. One more of a famous family likely to come to the front not long. Miss N. N. Dean, a graduate in medicine of Wisconsin University, has been in successful practice here for about four years, and her income last year is said to have reached over £2,000.

At Epsom, on May 27th, Mr. Arthur Thompson, Professor of the Guildhall School of Music, will give the annual entertainment of the funds of the new cottage hospital, assisted by some of his pupils.

The Yorkshire Rugby Football Union, at a meeting held in Leeds a few days ago, voted the sums of £900 3s. and £600 out of the proceeds of the challenge cup competition to the county medical and charitable institutions.

The death of the Rev. J. St. John Blunt vacates the post of Master to St. Katharine's Hospital, worth £2,000 a year. After the public attention called to the affairs of this hospital in connection with the Jubilee Fund, it is possible the post may not be filled.

A FESTIVAL SERVICE will be held in the nave of Westminster Abbey on Ascension Day, 28th May, at 7 p.m., in aid of Westminster Hospital. The service will include Mendelssohn's oratorio, "Eliahu," with full orchestras and chorus numbering nearly 400 performers.

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The Church of England Temperance Society has received a donation of £200 from an anonymous donor to provide a missionary for Clerkenwell police-court. The donation has been promised by the Rev. Dr. Oliver, of St. Mary's, Ealing, for a missionary for the Thames Police Court.

On the motion of Mr. Bradnall Carter, the London County Council has appointed a committee to enquire into and to report to the Council on the advantages which might be expected from the establishment, as a complement to the existing asylum system, of a hospital with a visiting medical staff, for the study of an epidemic treatment of insanity.