and she studied history and literature of every kind to educate her children. She brought the physique of the Barclays and Camerons, and something of the courtly bearing of the Stuarts, and the ability of their greater ancestors into the Galton stock. Samuel Galton himself contributed determination, industry and a strong element of Quaker stubbornness—but at the same time wide public and social sympathies, and a distinct scientific bent. Elizabeth Collier of more slender figure than Lucy Barclay was not behind her in beauty. She supplied an artistic instinct, a joyousness in life, an appreciation of form and expression which are less usual among the Society of Friends; in her ancestry we trace in addition both love of adventure and love of learning. And last, but not least, we have Erasmus Darwin, who presented his descendants with that great gift, the scientific imagination—the match which may light a strong fire if the solid fuel of other characters be provided.

Before we pass to the children of Samuel Galton the second, a word may be added here about the Galton houses in Birmingham and elsewhere (see Plate XXIX). We have already noted the partnership of the Farmers and Galtons (John and Samuel) originating in Bristol. When John went at first to Birmingham he took a lease of Duddeston, and this house at his death was taken over by his brother Samuel, and passed in 1799 to his nephew Samuel the second (see Plate XXX). He enlarged it in 1800 and went to reside there in 1801. Samuel soon after his marriage had bought a house in Five Ways, Birmingham, and added the next house to it. But in 1785 he went to live at Great Barr¹, a large country house about four miles out of Birmingham, spending the winter in various houses in Birmingham.

In 1702 the shop of Joseph Farmer was in the corner of Bull Street and the Minories in Old Square, Birmingham. He was an ironworker, who became a successful gunsmith. He lived in the Square till 1735 when he moved to the house in Steelhouse Lane, known afterwards as Farmer and Galton's house and subsequently still as Galton's Bank (see

<sup>&</sup>lt;sup>1</sup> This house, of which we give the photograph of a water colour (see Plate XXXI), was a frequent meeting place of the members of the Lunar Society. An interesting account of the meetings at Great Barr in her childhood is given by Mary Anne Galton (Mrs Schimmelpenninck). There is a paper in the Birmingham and Midland Institute Archaeological Section, *Transactions*, 1890, pp. 79—84, by H. C. Bolton, on the Lunar Society with references to Great Barr.

Plate XXXII). Joseph Farmer died in 1741 and his son James succeeded In 1746 Samuel Galton married Mary Farmer and went to live at 13 Old Square. When James removed to London, Samuel left the Square to live in the Steelhouse Lane house. He appears to have remained there after James' bankruptcy and his return to Birmingham, for the latter then went to live at Bingley House, which afterwards passed into the hands of the Lloyds. The Galton-Farmer house bore the initials J. F. in monogram over the doorway, and this fine old house, scarcely recognisable, still exists. In 1782 Galton rented Duddeston', he took a 99 years' lease of it in 1789 and his grandson purchased the freehold in 1820. Samuel his son lived immediately after his marriage also in the Steelhouse Lane house, he then went to Hagley Road, Edgbaston, and afterwards to Great Barr, finally settling at Duddeston on his father's death. Francis Galton's childhood from 1822 to 1832 Duddeston was the much frequented home of the grandfather; it was superintended by a highly respected Quaker housekeeper, Lizzie Forster, after the death of Lucy (Barclay) Galton in 1817. When in 1804 the gunsmith business was wound up2, the Farmer-Galton house was converted into a bank, possibly at the suggestion of the Barclays. In this bank Samuel and Samuel Tertius were partners with Paul Moon James, and later Hubert Galton, a younger brother of Tertius, also became a partner. In 1825 there was a general panic in the money market involving a run on the banks throughout the country. Hubert Galton, going up to Barclay's in London to borrow, found no less than ten partners of the Gurney banks come up for the same purpose. The run lasted about a week, but the strain on Samuel Tertius Galton was very great during the crisis—a crisis indeed which he had actually predicted in his tract of 1813. His friends, however, stood firmly by him during this trying period, and the bank weathered the storm well. The strain, however,

<sup>&</sup>lt;sup>1</sup> A Mr Freame appears to have rented Duddeston from 1757—1780, I am uncertain whether a relative of the Freames discussed above.

<sup>&</sup>lt;sup>2</sup> It would appear that Samuel Galton the second determined on his father's death to wind up the gun-factory (at one time producing guns at the rate of one a minute!) and start the bank. Whether this change was due to altering economic conditions, or to a religious scruple, reaching freedom of expression on the death of his father, we cannot say.

<sup>&</sup>lt;sup>3</sup> One friend collected 1000 sovereigns in a bag and threw it on the counter with a loud chink at the height of the crisis before the clamouring depositors asking the partners to take care of them for him, a most seasonable kindness. Mrs Wheler's *Reminiscences*.



The Galton-Farmer house, later the Galton Bank, in Steelhouse Lane, Birmingham, now a shop.



Friends' Meeting House in Bull Street, Birmingham, where the two Samuel Galtons with their wives attended and were ultimately buried.

induced Samuel Tertius gradually to close the bank, which was accomplished in 1831, without the majority of people knowing anything about it until nearly every account was paid off. The Galton Bank in Steelhouse Lane afterwards became the Polytechnic Institution, later a Children's Hospital, and afterwards (1897) was the house of a medical It is now converted into a shop. In 1831, the Galtons' business relations with Birmingham ceased, and Samuel Tertius retired to Learnington in 1832. He had never lived at Duddeston, although he purchased the freehold of it in 1820 for £8000, and it became later a most valuable building estate. After his marriage, he lived at Ladywood, then a mile from Birmingham, and here all his children were born, except Francis who was born at the Larches (see Plate XLV), one mile from Birmingham on the Warwick Road. house had been Dr Priestley's, being then called Fair Hill, and it was the house burnt in the Birmingham Riots to which we have already referred; nothing was left but one room and the laboratory over the There was a good garden and three fields, and here the children used to scamper about on the two small Welsh ponies— Scamper and Fenella—to which Charles Darwin refers in his letter of 1853:

"I should much like to hear something of your brothers Darwin and Erasmus: I very distinctly remember a pleasant visit at the Larches, now many years ago, and having many rides with them on ponies without stirrups."

Of this visit of Charles Darwin to the Larches Mrs Wheler writes as follows in her *Reminiscences*:

"My Uncle, Dr Robert Darwin, was a tall, very large man, weighing more than 20 stone, but wonderfully active for his size and very fond of his garden. He was extremely cheerful and agreeable, full of amusing anecdotes and considered a very clever doctor. His son Charles was a very pleasant lad; when about 15, he was staying with us and went out with my Father to practise shooting; on his return we asked if he had been successful. 'Oh,' said my Father, 'the birds sat upon the tree and laughed at him.' Some time after my Fathers and Brothers went to Shrewsbury. My Father had hardly sat down, when Charles begged him to come out on the lawn, where he threw up a glove and hit it shooting, without missing, two or three times."

In 1824 Samuel Tertius purchased Claverdon<sup>2</sup>, an estate near Warwick, which, at first a summer residence, became later almost the

<sup>&</sup>lt;sup>1</sup> It was rebuilt and occupied by Withering the botanist.

<sup>&</sup>lt;sup>2</sup> It is now in possession of his grandson, Mr Edward Wheler Galton, and contains a valuable collection of Galton, Darwin and Barclay pictures and manuscripts.

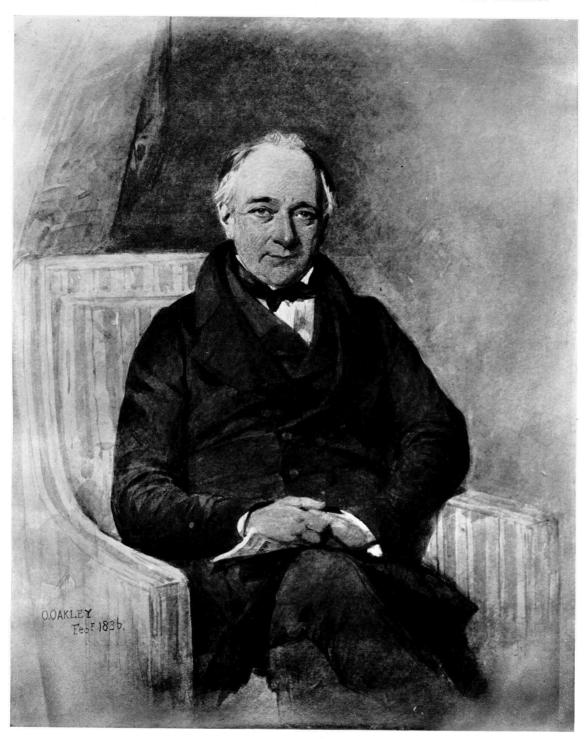
family centre. Samuel Tertius and Francis Galton and many of the family are buried in Claverdon churchyard. The earlier Galtons were buried in the yard of the quaint little Meeting House of the Society of Friends at Birmingham, a photograph of which is here reproduced.

Of Samuel Tertius Galton (see Plates XXXIII and XXXIV) we have many accounts from his children. Francis Galton describes him as "one of the most honorable and kindly of men and eminently statistical by nature."

"When we children quarrelled," writes Mrs Wheler, "and went to my Father or Mother to complain, he used to send one into one corner of the room, and the other into the opposite corner, and at the word of command, each had to rush into the other's arms. This made us laugh and ended the dispute. My Father was a true peace-maker, he always turned the matter off playfully. He was fond of science, and took much interest in all new improvements. He liked measuring hills and mountains with his portable barometer, which we always took on a journey and which required great care not to break."

The scientific instruments, however, with which he amused and instructed his children appear to have been chiefly those purchased by his father. Samuel Tertius does not seem to have been a man of quite the vigour or originality of his father, but he inherited his father's public spirit and much of his business capacity. He was High Bailiff of Birmingham in 1814, and took up the addresses from that town to the Prince Regent on the restoration of peace and on the marriage of Princess Charlotte. This public work was continued as magistrate and deputy-lieutenant after his removal to Leamington. He was called upon to act in numerous arbitrations owing to the widespread esteem for his good sense and judgment. It is reported that he never kept a poor man waiting, always saying "Time was money to the poor." While he suffered, as his father and grandfather had done, and his sons

- <sup>1</sup> He was educated at Dr Valpy's School, Reading, and was entered in 1799, aged 16, as a pensioner at Trinity College, Cambridge. His father's account-book would seem to show that he went into residence, but he did not matriculate, and we soon after find him in a commercial office in Liverpool.
- <sup>2</sup> His only published work: "A Chart exhibiting the Relation between the Amount of Bank of England Notes in Circulation, the Rate of Foreign Exchanges, and the Prices of Gold and Silver Bullion and of Wheat, accompanied with Explanatory Observations," London, 1813, is a graphical consideration of what we now term the correlation of these variates. It is a strong attack on an inconvertible paper circulating medium, and predicts disastrous consequences as invariably following such a system. It must have been quite useful in its day.



SAMUEL TERTIUS GALTON (1783—1844).

Father of Francis Galton, and husband of Violetta Darwin.

From a painting by Oakley in 1836.



Tertius Galton, with his children Adèle, Erasmus, Emma and Bessie. 1837. From a silhouette in the possession of Mr Wheler Galton at Claverdon.

Hubert and Francis did later, from asthma, he yet inherited something of his Barclay ancestors' power of walking, and would walk all day without fatigue. He was not a man of that kind of note which finds its way into biographical dictionaries, but he did—what many of us everyday mortals fail to do—the usual work of the everyday world and he did it well. As a result he was respected by all who knew him and beloved by all his children, who found in him on every occasion their best friend. He died at the relatively early age of 61, and left his sons each sufficient fortune to follow their own bent apart from a profession.

Like Samuel Tertius, his two brothers John Hubert Barclay Galton (1789-1864) and John Howard Galton (1794-1862) married into able stocks, the first married Mary, daughter of Robert Barclay, Banker of London, and therefore a multiple cousin; the second a daughter of Joseph Strutt and ultimately his heiress. Miss Strutt was a granddaughter of Jedediah Strutt (1726-1797), the partner of Arkwright in establishing the spinning jenny, and himself an inventor of no mean order. Her father was not only the benefactor of Derby, but an intimate friend of Thomas Moore and Edgeworth. Hubert had four children, three died quite young and the fourth left no issue. John Howard Galton's is the only line by which the name of Galton has been preserved. His second son Sir Douglas Galton (1822-1899) reached fame in a variety of ways: as a Royal Engineer he did much good, especially for the Commission on the Application of Iron to Railway Structures (1848); he was General Secretary and afterwards President of the British Association and the third of his name to obtain fellowship of the Royal Society. He was Assistant Inspector-General of Fortifications (1859-1862), Assistant Under-Secretary of War (1862-1870) and Director of Public Works and Buildings (1870—1875); and generally an able chairman of committees and of very considerable inventive ability. His achievements mark the scientific and business capacity of Galton and Strutt stocks, apart from the scientific imagination contributed by the Darwin blend. Of Tertius Galton's sisters the most noteworthy was Mary Anne (1778-

<sup>&</sup>lt;sup>1</sup> A shorthand diary of Tertius Galton for the years 1829—1844 (Eugenics Laboratory) testifies to his multifarious duties and his genial nature.

<sup>&</sup>lt;sup>2</sup> Of the remaining brothers Ewen Cameron died as a child of nine, according to family tradition from the rough usage he received from the elder boys at Dr Valpy's

1856), who married Lambert Schimmelpenninck. She was a woman of very considerable literary power and made a special study of Port Royal; her works, The Theory and Classification of Beauty and Deformity, 1815, and Select Memoirs of Port Royal, 1829, had considerable vogue in their day. Francis Galton has said all that need be said on her separation from her family. Members of the same family are at times mutually incompatible and it is a fact, not perhaps easily explicable, but none the less demonstrable that such incompatibilities often reappear generation by generation. Of the two other sisters of Samuel Tertius, Sophia (1782-1863) married (1833) Charles Brewin—his grandfather Charles Lloyd was first cousin of Charles Lloyd who married Mary Farmer—and Adèle (1784 -1869) married Dr John Kaye Booth (1827). Neither of these marriages made relatively late in life had issue. Of his Galton uncles and aunts, Mrs Booth in face resembles most closely Francis Galton, and she has more resemblance to Samuel Galton, her father, than Mrs Schimmelpenninck or Mrs Brewin, who are more like Lucy Barclay in their portraits. But in mental characters—strong sense, excellent memory, business aptitude and fondness for natural history—Mrs Brewin had much that was akin to her nephew Francis, and perhaps she is with the exception of Sir Francis Darwin the nearest of any uncle or aunt to him in character (see Plates XXXV and XXXVI).

Of Francis Galton's own brothers—Darwin Galton and Erasmus Galton—little need be said here. Erasmus entered the navy, but soon retired. Both brothers took their places as country gentlemen, and did their duty to their neighbours and to their shire. This was a life to which much of their ancestry, both Darwin and Galton, had been accustomed. On the one side had intervened the Quaker movement, followed by mercantile success, on the other, the exceptional appearance of Erasmus Darwin. But the younger generation, whether we consider the offspring of Violetta Galton or Francis Darwin, followed a sort of natural instinct and returned to the land. Their love of wild life and nature may have been great, but it did not lead them to the interpretation as well as to the observation of living forms. For a time it seemed that this native bent would master Francis Galton. Like his

school at Reading. The other brother Theodore, a young man of much ability, died of fever at Malta (1810) when returning homeward with Francis Darwin—the fourth death in the party.



THEODORE GALTON (1784—1810). Uncle of Francis Galton,



ADÈLE GALTON (1784—1869). Mrs T. K. Booth, Aunt of Francis Galton.



SOPHIA GALTON (1782—1863). Mrs Charles Brewin, Aunt of Francis Galton.



MARY ANNE GALTON (1778—1856). Mrs Schimmelpenninck, Aunt of Francis Galton.



ADÈLE GALTON (1784—1869). Mrs J. K. Booth, Francis Galton's "Aunt Booth."



THEODORE GALTON (1784—1810). Uncle to Francis Galton. From a miniature.

brothers he was in a position to become a country gentleman, and he himself says that, when aged 24 he returned from Syria,

"I was conscious that with all my varied experience I was ignorant of the very ABC of the life of an English country gentleman, such as most of the friends of my family had been familiar with from childhood. I was totally unused to hunting, and I had no proper experience of shooting. This deficiency was remedied during the next three or four years. Under the advice of my eldest brother, I bought a hunter and a hack, and began to hunt at the rate of about three days per fortnight in Warwickshire and at neighbouring meets" (Memories, p. 110).

But something else mastered this ancestral instinct. Galton was not to revert to the land and after six years the Wanderlust again sent him forth on his travels. If we knew the little difference which divides one man from another, even within the same family, we should have the key to most of life's riddles. Of one thing we can be certain, it is not slight variations of environment; it is the individuality of nature not of nurture.

If we endeavour to sum up the fairly detailed account we have given of Francis Galton's kinships, can we attribute to their different sources some of the chief physical and mental characters we note in him? The following may be emphasised as marked features of Francis Galton:

Physical. (a) Marked longevity. (b) Very considerable physical strength and power of endurance. (c) A well knit figure somewhat above the average height and not tending to corpulence. (d) Regular features, with nothing unfinished, or at all unkempt about the person, generally what are described as "good looks." (e) Blue eyes and light hair. (f) Ailments, asthma and deafness. (g) Good digestion.

Of these physical qualities the marked longevity seems to have come from Elizabeth Collier; the physical strength from the Camerons and Barclays; the well-knit figure and good looks possibly from Beau Colyear', though Samuel Galton the second possessed them in a marked degree. The blue eyes and fair hair were again probably a Barclay heritage; the asthma, and also possibly the deafness, a Galton character—both Samuel Tertius and his father Samuel suffered badly from asthma. Thus we realise that in most of his physical characters Francis Galton was not a Darwin; Darwin physical characters have

<sup>&</sup>lt;sup>1</sup> Of Sir Henry Savile it was said that he was "an extraordinary handsome man, no lady having a finer complexion."

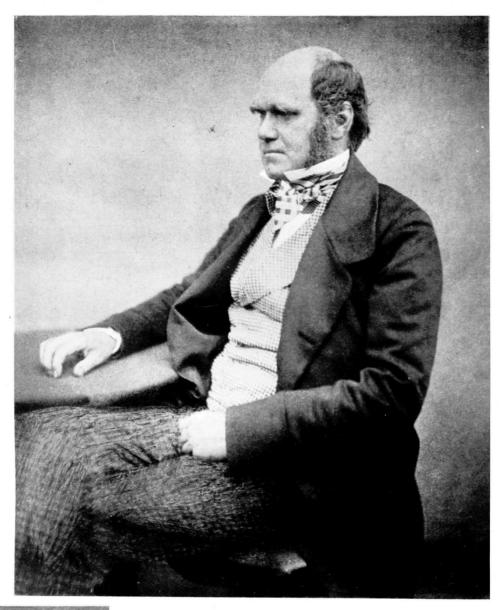
appeared in more than one of the descendants of Samuel Tertius and Violetta, but the most close of the Darwins to Francis Galton was his uncle Sir Francis Darwin, who also has the Collier strain. And in several of the physical features which seem to differentiate Francis Galton from many of his Galton kin, they seem to resemble more than he did the Darwins. If we take portraits of Charles Darwin and of Francis Galton in middle life, we may perhaps detect some resemblances in the rather firm lips, the strong chin, the heavy brow and luxuriant eyebrows, the slightly receding forehead and the apparent absence of marked occipital development (see PlateXXXVII). But taking physique as a whole, Galton was in popular language, "not a Darwin." It is to the mental characters we must turn for likeness.

Mental. (a) Even temper. (b) Great sympathy. (c) Ascetic rather than sensuous. (d) Strong mechanical bent. (e) Keen delight in numerical evaluation and symbolic expression, two factors hardly to be put, perhaps, under one heading. (f) Strongly emphasised power of observation and appreciation of observation—what we might almost speak of as the "clinical instinct." (q) Marked love of adventure, the roving lust. (h) By no means a student or collector in the usual sense, neither a wide reader of books nor a worker in museums. Galton rather observed and collected to answer a problem he had a priori proposed to himself, than studied material with a view to the discovery of some hidden secret. (i) Continuous concentration in reading or analysis was liable to lead to "mental fag," and on two occasions in his life led to a breakdown. (j) An instinct almost amounting to a moral sense that the end of science was not so much knowledge for its own sake, as social utility and increased human efficiency. (k) Much steadfastness of purpose accompanied by a considerable power of controlling others and inspiring them to fulfil his planned ends. (l) A noteworthy sense of humour. (m) A great appreciation of the need for clear expression in science.

We believe that several of these features are markedly Darwin, but others just as certainly come from different strains.

Power of observation, the "clinical instinct" that we have referred to, was essentially Darwin. Probably also much of his sympathetic

<sup>&</sup>lt;sup>1</sup> Francis Galton himself has said that he had a quick temper only gradually brought under control by exercise. If this be so, the power of control was probably hereditary.





CHARLES DARWIN, aged 51.

From a photograph by Maull and Fox, touched up by Mrs Darwin and now in the possession of Mr William E. Darwin.

FRANCIS GALTON, aged about 50.

From a photograph in the
Galton Laboratory.

These two photographs in much the same attitude indicate the degree of resemblance between the two grandchildren of Erasmus Darwin.

nature arose from the same source. Although a most distinguished mathematician has appeared in the Darwin stock, and it is stated that Erasmus Darwin the younger was statistically minded, there was no trace of it in Erasmus the elder, and it may be safely said that statistics were almost distasteful to Charles Darwin himself. On the other hand Samuel Tertius Galton, as we have already seen, published a statistical tract, and he and quite a number of his family delighted in numerical and statistical representation. There is hardly a doubt that this was in Francis Galton an emphasised Galton heritage, not wholly unassociated with considerable power of fine draughtsmanship, which we also find in other members of the family. During many years of friendship with Francis Galton, his present biographer never saw him handle the pencil nor had any reason to believe he had special aptitude in this matter; and yet examining his earlier notebooks and diaries we find them full of sketches which show that he had equal capacity with his sisters in draughtsmanship. When we read also the accounts of the work of his Galton ancestry in Birmingham, the manner in which they not only built up a great business, but also were continually engaged in public and charitable work, we must again place to their credit the passion Galton exhibited to turn all his work to public service—to regard all science as subservient to human progress. He was not content that the Eugenics Laboratory should produce merely scientific memoirs; he repeatedly urged its members to place their results in a popular form before a wider public. He disliked technical terms, and demanded the expression of results in language that all men can understand. Probably he and the present writer were not quite at one on this point, partly because the latter believed that new technical terms are needful in every progressive branch of science, partly because the writer thought that Biometry and Eugenics must in the first place establish themselves by the production of work especially appealing to the scientific world. Francis Galton pulled his way, and his biographer pulled in the opposite, both, perhaps, with something of Quaker stubbornness, but never with the least personal friction, and in the end came the compromise which marks the publications of the Galton Laboratory and the directions for its guidance in his will. Reference is made to these matters here because it must be fully realised that the social utility of his work was not a secondary but a primary motive in Galton's character. Charles Darwin thought that to add to the sum of knowledge

was perhaps the most respectable object a man can have in life, and this desire to increase knowledge amounts in some of our greatest men to the equivalent of Spinoza's Amor dei intellectualis; in the case of Francis Galton it was rather an "intellectual love of man" which was the motive force in his work. Charles Darwin collected facts bearing on selection without any theory and on a wholesale scale. made his systematic enquiry and then searched for a law. Baconian method was not Francis Galton's. He had formed his problem, and he devised his experiments or recorded his observations so as to give a definite answer yes or no to his questions. It was rather the economy of a business instinct. The inspiration came first, but he did not put it down as possibly his grandfather Erasmus would have done without array of reasoned and well-marshalled facts. made just the limited observations which confirmed or refuted it, and in almost all Galton's work we see observations collected to answer an individual and relatively closely defined issue. We cannot fit diverse types of mind into rigid categories, but roughly we may say that Erasmus Darwin, Charles Darwin, and Francis Galton all possessed in a high degree scientific imagination. Erasmus put down his inspirations without due demonstration or effective self-criticism. Charles Darwin collected his facts before he allowed his imagination to play on them, he followed his inspirations by self-criticism and due demonstra-Francis Galton used his imagination to find his problem, then narrowed it to a small issue, and tested its truth by experiment and observation before publication. To a certain extent the difference in method is that of Bacon and Newton—possibly that of the biological and mathematical temperament. Something of the difference in Charles Darwin and Francis Galton was hereditary, and marked the concentrated business instinct which Galton inherited from Farmers and Freames, Braines and Barclays, as well as his own name-stock. was that business instinct applied in science. Perhaps also the danger of "mental fag," a heritage which we are inclined to think came from the Farmers—was influential in guiding Galton in the matter. was never a great collector or a mighty reader as his cousin Charles Darwin undoubtedly was.

In the roving lust again we see Cameron, Barclay and Colyear ancestry rather than Darwin, and, as already hinted, this influenced

<sup>1</sup> See Life and Letters, Vol. 1, p. 83.



NANGORO, KING OF THE OVAMPO.

Engraving from the First Edition of Francis Galton's *Tropical South Africa*. The King of the Ovampo crowned by the explorer. In illustration of Francis Galton's sense of humour.

Galton's attitude in science; he delighted in inroads into unexplored territory, or even into what his neighbours considered as their special preserves.

The incursions of a pioneer mind, unfettered by the orthodox opinions of a specialised group of workers, however irritating to the established hierarchy, are undoubtedly of the highest service to science, if that mind has exceptional insight and marked novelty of method. Both these Galton possessed in the highest degree.

Steadfastness of purpose—may we not credit something of this to Robert Button and Jaspar Batt with their many years of gaol experience? power of control and of inspiring others may be sought legitimately also in that more distant ancestry of great names to which I have but briefly referred (see Pedigree Plate B).

From Barclay, from Sedley and possibly from Collier came the desire for terse expression, the demand for simple language. But I doubt whether the wit of Sedley was akin to the humour of Francis Galton. Speaking of his father, Samuel Tertius, Galton writes:

"He was devoted to Shakespeare, and revelled in *Hudibras*; he read *Tom Jones* through every year, and was gifted with abundance of humour<sup>1</sup>."

The humour of Samuel Tertius was certainly manifest again in his son. Many will remember the numerous personal anecdotes told by Francis Galton with keen appreciation of subtle humour, and never with touch of malevolence. But those who were not thus favoured will recall the famous incident of his desire to impress a Hottentot captain, who might prove dangerous, and how, with this end in view, he rode in a red hunting coat on an ox up to the captain's hut, thrusting the ox's nose into the very doorway of his abode. Or again, having sufficiently impressed a negro chief with his visitor's weight and importance, he then led him outside, and to emphasise the negro's own worth he proceeded to decorate his sable majesty with a paper crown of gold tinsel. The picture of the resulting figure published in the first edition of his Tropical South Africa, p. 220, and reproduced here (see Plate

<sup>&</sup>lt;sup>1</sup> Memories, p. 8.

<sup>&</sup>lt;sup>2</sup> It is of importance to emphasise this because the late Dr John Beddoe declared in a short notice of Francis Galton (*Man*, 1911, p. 34) that "Humour was the only quality we could conceive as lacking in him; and we know it is apt to be so in the Quakers." Humour is incapable, perhaps, of definition, and the above statement is of marked interest as indicating how big personal equation can be in its appreciation.

XXXVIII) ought to be sufficient evidence of Galton's sense of humour! Or consider his account of how, not daring to ask the privilege of measuring a steatopygous lady, the wife of a Hottentot chief, he hit upon the idea of taking from a distance, by aid of his sextant, a trigonometric survey of her person; this more than establishes an inheritance of ancestral Galton humour.

Lastly, the gift of mechanical ingenuity, which was such a marked feature in Galton's nature, and helped him so largely in his work whence did he derive this sense? In the first place the business of an ironmaster and gunsmith cannot be developed by mere business We find whether we turn to the Strutt and Arkwright, the Boulton and Watt or the Wedgwood firms that for success mechanical ingenuity must supplement the business aptitude. I have little doubt that this applies also to Galton and Farmer, and that one or both contributed this factor, a very needful factor indeed, to their successful But we must not neglect from this aspect Erasmus Darwin's mechanical instincts as evidenced by his colour grinding-mill (see p. 16), the ferry from his house to his orchard, or his commonplace book which still exists and deals with numerous mechanical problems (see p. 16, ftn. 3). Nor has Erasmus been the only Darwin distinguished by mechanical ingenuity. We think, therefore, that we have probably here a case of intensified heritage from Farmer and Darwin stocks.

Thus as most men Francis Galton was physically and mentally a blend of many ancestral traits. Whether they were "unit characters" or not concerns us little here. What we do realise is that they were not the product of environment, whether of home or school or college. Few men have had more noteworthy ancestry in many lines than Francis Galton; that such ancestry should produce, not several, but one brother alone of this marked social value can puzzle only those who have not considered the wide range of possible variations which arise as we rotate the kaleidoscope of heredity. If on the average only one in four brothers of distinguished stock reaches first-class eminence, can we not quite well understand how Charles Darwin and Francis Galton stand alone, but also appreciate how greatly the chances of perpetuating ability are reduced, when men of able stocks leave in modern conditions but one or two children to preserve their name? Let the reader remember that with our modern views as to parental responsibility neither Charles Darwin nor Francis Galton would have been born! Herein lies, we fear, all too certainly the key to that dearth of exceptional ability which marks our own age. Herein lies also the key to Francis Galton's demand that Eugenics should pass as rapidly as possible from the laboratory to the market-place.

In discussing his ancestry, we feel sure he would have allowed us to draw a moral; for he recognised fully that the modern principle of small families applied to able stocks spelt disaster for the nation. One able leader, inspirer and controller of men, is worth thousands of everyday workers to the race.

"I have no patience," wrote Francis Galton in 1869, "with the hypothesis occasionally expressed, and often implied, especially in tales written to teach children to be good, that babies are born pretty much alike, and that the sole agencies in creating differences between boy and boy, and man and man, are steady application and moral effort. It is in the most unqualified manner that I object to pretensions of natural equality."

It is a hard doctrine for democracy, but the safety of the state lies in its acceptance.

Note to p. 46. The following characterisation of the Lunar Society from a letter of Erasmus Darwin to Boulton is so excellent that it may be reproduced here:

April 5th, 1778.

DEAR BOULTON,

I am sorry the infernal divinities who visit mankind with diseases, and are therefore at perpetual war with doctors, should have prevented my seeing all your great men at Soho to-day. Lord! what inventions, what wit, what rhetoric, metaphysical, mechanical, and pyrotechnical, will be on the wing, bandied like a shuttlecock from one to another of your troup of philosophers, while poor I, I by myself, I, imprison'd in a post-chaise, am joggl'd, and bump'd, and bruised along the king's highroad to make war upon a stomach-ache or a fever......

ERASMUS DARWIN.

Thus wrote the patriarch of the Society according to Dr Bolton, loc. cit. p. 49, ftn.