

## Galton, Francis

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# Galton, Francis

(*b.* Birmingham, England, 16 February 1822; *d.* Haslemere, Surrey, England 17 January 1911)

*statistics, anthropometry, experimental psychology, heredity.*

Galton's paternal ancestors were bankers and gunsmiths, of the Quaker faith, and long-lived. His mother was [Erasmus Darwin](#)'s daughter, and thus he was Charles Darwin's cousin. Galton's intellectual precocity has become a textbook item, and [Lewis Terman](#) estimated his IQ to have been of the order of 200. His education, though, was desultory, its formal peaks being a few mathematics courses at Cambridge (he took a pass degree) and some unfinished medical studies in London. He quit the latter at the age of twenty-two when his father died, leaving him a fortune. He then traveled. Journeying through virtually unknown parts of southwestern Africa in 1850–1852, Galton acquired fame as an intrepid explorer. His immediate reward was a gold medal from the Geographical Society, and his later reports led to election as a fellow of the [Royal Society](#) in 1860. In 1853 he married, and in 1857 he settled into a quiet London home, where he remained, except for occasional European vacations, until his death over half a century later. Galton was knighted in 1909. He died childless.

Galton was perhaps the last of a now extinct breed—the gentleman scientist. He never held any academic or professional post, and most of his experiments were done at home or while traveling, or were farmed out to friends. He was not a great reader, and his small personal library was said to consist mainly of autographed copies of fellow scientists' books. He composed no *magnum opus*, but he kept up a rich flow of original ideas. An endless curiosity about the phenomena of nature and mankind was nicely coupled with mechanical ingenuity and inventiveness. Secure and contented in the employment of his wideranging talents, Galton was an unusually equable person. Anger and polemic were alien to him. In his later years he was fortunate in having the ebullient [Karl Pearson](#) as champion and extender of his ideas. Pearson subsequently became the first holder of the chair of eugenics at University Colleges, London, that Galton had endowed in his will.

Galton's earliest notable researches were meteorologic, and it was he who first recognized and named the anticyclone.

Foremost in Galton's life was a belief that virtually anything is quantifiable. Some of his exercises in this direction are now merely amusing—a solemn assessment of womanly beauty on a pocket scale, a study of the body weights of three generations of British peers, and a statistical inquiry into the efficacy of prayer are examples—but there can be little doubt that his general attitude was salutary in its day. Moreover, against the trivia have to be set such good things as his developing Quetelet's observation that certain measurable human characteristics are distributed like the error function. Galton initiated an important reversal of outlook on biological and psychological variation, previously regarded as an uninteresting nuisance. In his own words: "The Primary objects of the Gaussian Law of Errors were exactly opposed, in one sense, to those to which I applied them. They were to get rid of, or to provide a just allowance for, errors. But these errors or deviations were the very things I wanted to preserve and know about." In psychology Galton sowed the seeds of mental testing, of measuring sensory acuity, and of scaling and typing. In statistics he originated the concepts of regression and correlation.

Galton's best-known work was on the inheritance of talent—scholarly, artistic, and athletic—raw data being the records of notable families. He found strong evidence of inheritance. Upholders of the rival nurture-not-nature theory attacked the work, on the ground that the children of gifted and successful parents are environmentally favored; but even when allowance was made for this truth, Galton's contention could not be wholly denied. One outcome of the investigation was a conviction in many people's minds—and particularly deeply in Galton's own mind—that a eugenic program to foster talent and healthiness and to suppress stupidity and sickness was a *sine qua non* in any society that wished to maintain, let alone promote, its quality and status. (Galton coined the word "eugenics" in 1883).

Galton's views on genetics are historically curious. Influenced by Darwin's belief that inheritance is conditioned by a blending mechanism, Galton propounded his law of ancestral heredity, which set the average contribution of each parent at 1/4, of each grandparent at 1/16, and so forth (the sum, over all ancestors of both parents, being asymptotic to unity). [Karl Pearson](#) and his colleagues pursued the notion in a series of sophisticated researchers, but Galton's law received withering criticisms after the rediscovery, in 1900, of Mendel's work on particulate inheritance. Yet Galton had himself toyed with the notion of particulate inheritance, and in a remarkable correspondence with Darwin in 1875 he sketched the essence of the theory and even discussed something very like what we now know as genotypes and phenotypes under the names "latent" and "patent" characteristics. He did not press these views, perhaps because of the strong climate of opinion in favour of [blending inheritance](#) at that time.

Galton's establishment of fingerprinting as an easy and almost infallible means of human identification transformed a difficult subject, and his taxonomy of prints is basically that used today. He was disappointed, however, to find no familial, racial, moral, or intellectual subgroupings in the collections he examined.

## BIBLIOGRAPHY

I. Original Works. Galton wrote sixteen books and more than 200 papers. Of the books, recent printings are *Hereditary Genius* (London, 1869; 3rd ed., 1950); *Art of Travel* (5th ed., London, 1872; repr. Harrisburg, Pa., 1971); and *Finger Prints* (London, 1893; facs., [New York](#), 1965). An unpublished utopian book, "The Eugenic College of Kantsaywhere," written toward the end of his life, is excerpted in Karl Pearson's biography (see below). His autobiography, *Memories of My Life* (London, 1908), is worth reading. The best listing of Galton's publications is appended to Blacker's book (see below).

II. Secondary Literature. Immediately after Galton's death his friend Karl Pearson started a biography that was to become one of the most elaborate and comprehensive works of its kind in this century: *The Life, Letters and Labours of Francis Galton*, 4 vols. (London, 1914-1930). A treatment emphasizing the interests of his later years is C.P. Blackers, *Eugenics, Galton and After* (London, 1952). A good survey of his psychologic contributions is H. E. Garratt, *Great Experiments in Psychology* ([New York](#), 1951), ch. 12. The 1965 repr. of *Finger Prints* (see above) contains a biographical intro, by Harold Cummins that places Galton's fingerprint work in historic context.

Norman T. Gridgeman.