

Foreword

Francis Galton has had a bad press. Unlike his cousin, Charles Darwin, he is seen as the founder not of a science, but of an ideology: and those who took up his eugenical ideas and followed them to (and beyond) their logical conclusion are condemned by the court of history.

As this revised biography makes clear, that is both unfair and inaccurate. Scapegoats are always useful: but to heap the sins of the twentieth century on the science of the nineteenth is naive. Galton was much, much more than a mere disciple of the notion of genes as destiny, and many, if not most, of his contemporaries, however they are remembered, had social views that would be seen as distasteful today. He is worthy of more than just to be remembered simply as kin to the greatest of all biologists and as the founder of a science whose origins are best forgotten.

This book gives Francis Galton what he deserves. It shows him as he was: as an extraordinary polymath, a man of unbounded energy, and a master of English prose. However, it is not afraid to point out his faults: his unVictorian (but very English) tendency to dilettantism and his inability to follow through an idea

to its logical conclusion. Charles Darwin had a passion for facts and spent his life grinding through a vast mass of them in support of his single great theory. His grandfather Erasmus – the link between Charles and Francis – was, in contrast, more inspired by ideas. With his large private income and determined amateurism he could afford to leave the facts for others to accumulate.

Those who believe in hereditary genius (and not many of those remain outside the walls of the Faculty of Arts) might deduce that Erasmus' gene was passed to his grandson Francis. He was a precocious boy who grew into a man obsessed with brilliant notions, almost none of which came off in his own time. Only now, almost a century after his death, can we see – with the help of the thousands of modern toilers in the great variety of intellectual vineyards planted by Galton – the extraordinary breadth of his imagination.

There is, of course, human genetics, today's most over-exposed science, which has, in one sense, with the completion of the map of human DNA, reached the end of the journey on which Galton took the first steps. In another it is scarcely further along the road than when it began, because it still understands little about the qualities – height, weight, intellect – which obsessed Galton and his contemporaries. If anything, the biggest advance in genetics since their day is to see how complicated and impenetrable such attributes are, and how far we still are from any insight into the inheritance of human 'quality', insofar as that term has any meaning. Genetics is one of the few sciences to have reduced its expectations since Victorian times.

But there was more to Erasmus' descendant than inheritance. Many of his innovations helped form the modern world: weather forecasting (with his invention of the word anticyclone and the first weather map to be published in a newspaper), the use of fingerprints in criminal cases, the transmission of images via the telegraph (his contribution to the development of the Internet) and the composite photographs that are now made by computer. His work on the relative sensitivity of men and women at the

nape of the neck may not have lasted quite as well (and ‘Arithmetic by Smell’ has disappeared altogether), but even that was a precursor to today’s extensive work in sensory physiology.

Francis’ father was, his son remembered, ‘eminently statistical by nature’. His own maxim (still inscribed on the masthead of the *Annals of Human Genetics*, published by his intellectual descendants) was that: ‘General ideas are never to be trusted . . . it is the triumph of scientific men to rise superior to such superstitions, to desire tests by which the value of beliefs may be ascertained, and to feel sufficiently master of themselves to discard contemptuously whatever may be found untrue.’ Galton’s most abiding legacy is in statistics, and his idea of ‘regression to the mean’ (the tendency for the children of, for example, an unusually tall father and mother to be tall, but less so on average than their parents) was at the base of much of modern statistical analysis. His ‘statistical test of the efficacy of prayer’, which showed that the frequently prayed-for lived for no longer than those not drawn to God’s notice has not, perhaps, had the attention it deserves.

Galton (who could quote *The Odyssey* at the age of six) went on to study medicine. Unlike his cousin Charles (who did the same but was so revolted by operations in that age before anaesthetics that he could not continue), Francis noted, at the age of sixteen but with mature scientific detachment, only that: ‘The cries of the poor fellows who were operated on were characteristic: in fact, each class of operation seemed to evoke some peculiar form of them.’

As was true for Charles on his voyage on the *Beagle*, Francis’ life was formed by travel – although his dozens of expeditions over half a century and more were firmly directed towards pleasure rather than science. He made the very Victorian statement that: ‘There is certainly nothing more important than travelling. The more you see the more you are convinced of the superiority of the English.’ He ventured to Egypt and to Syria, and deep into southern Africa. His *Art of Travel*, with its various shifts and contrivances available in wild countries (his recipe for making tea

under difficult circumstances deserves to be read today), became a standard handbook for a generation of explorers.

As Francis Galton grew older his journeys became confined to the spa towns of Europe, but his capacity for sustained work and ingenious speculation did not diminish. He remained infinitely curious to the end of his long life. In his will he left a substantial sum to found a National Institute of Genetics (now the Galton Laboratory at University College London) and, through that and its American equivalent at the Cold Spring Harbor Laboratory on Long Island, it is possible to trace a direct link between his own interests and the complete human gene sequence published in 2001. Galton would have been delighted with that discovery; and might, indeed, have had something to say about the new statistical methods that have been developed to deal with the mass of information present in three thousand million letters of DNA.

Unfashionable though it is to say so, most of what today's genetics does, with an agenda of liberal concern for the health of families and of society, would be welcomed by Galton. The only substantial change (and it is a healthy one) has been to direct attention to individuals and to families rather than, as the Victorians and their unsavoury twentieth-century disciples had done, to populations and to posterity. That move shifted the study of inheritance from the realm of politics to that of medicine, where it belongs.

Derek Forrest has brought the real Galton – rather than the caricature often presented to the public – back to life. Filled with anecdotes both from and of his hero, his book is an engaging portrait of an extraordinary Victorian. Milton, it is said, was the last man to know everything. Charles Darwin was about the last who knew everything (or everything worth knowing) about biology. Francis Galton had no interest in knowing everything about anything; but he knew enough about such a diversity of topics to found whole sciences which now boast experts of their own.

It is perhaps possible to imagine a new Darwin: a person of such encyclopaedic learning in a particular field that he comes forth with an as yet unimagined unifying theory. We will, in this

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century of science as a branch of economics, never see another Galton: another polymath able to indulge his remarkable mind to whatever took his fancy and to come forth with a stream of ideas from the ludicrous to the momentous. It is time to remember him not just as Darwin's cousin, or the founder of an endeavour whose ideas were once abused, but as a unique and neglected figure in the history of science, and of England. To do so one need go no further than open the pages of this marvellous book.

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