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AN FACULTY AND ITS DEVELOPMENT

Inquiries into Human Faculty and its Development. By Francis Galton, F.R.S. (London: Macmillan and Co., 1883.)

AMONG all his anthropological brethren Mr. Francis Galton has no competitor in regard to the variety and versatility of his researches. So various and versatile, indeed, have these researches been, that, with the exception of "Hereditary Genius" and "English Men of Science, their Nature and Nurture," we have become accustomed to regard them as disconnected pieces of work, which from time to time were thrown off like sparks from the flame of an active mind. But in the present volume he has collected in one series most of the investigations which he has separately published during the last ten years, and this collection when read in the light of a considerable amount of additional matter, clearly shows that the sundry investigations which were separately published were not separately conceived, but have throughout been united by the bond of a common object. This object, as the title of the book indicates, is that of inquiry into Human Faculty and its Development. And it is evident, when this fundamental note is supplied, that it serves to join not only the researches contained in the present volume, but also those of its above-named predecessors, into one harmony or design.

But although there is one harmony pervading this work, the changes of theme are so numerous that we shall not be able to touch upon them all, and must therefore restrict ourselves to considering the more important.

The book begins with an essay on "Variety of Human Nature," as to features, bodily qualities, energy, sensitivity, special senses, &c. In the course of this chapter the leading results of the author's well-known investigations on composite portraiture are brought in, the audibility of high notes in different individuals, as well as in different species of animals, &c. Next there follows a chapter on "Anthropomorphic Registers," which is mainly directed to showing the desirability of keeping family records of the anthropometry of children until they are old enough to continue the records for themselves. To facilitate this process—which he deems to be one of much practical importance in view of all that is now known touching the potency of hereditary influences—Mr. Galton urges that anthropometric laboratories should be established where all the needful periodic portraiture and other observations on the life-history of children should be made and preserved on the payment of small fees by the parents. Without such systematic observation any one may pass through life without knowing that he presents so strongly marked a peculiarity as that of colour-blindness; while the benefit to the race, a few generations hence, of a large mass of statistics of such consecutive anthropometry of numerous families would probably be of the utmost value. Indeed this suggestion as to anthropometric laboratories may be taken as the foundation of Mr. Galton's proposed science of "eugenics," to a tracing of the main principles of which his work on "Human Faculty" is chiefly concerned.

After a chapter on "Statistical Methods," we come to

a consideration of "Character." So far as sex is concerned, "one notable peculiarity in the character of the woman is that she is capricious and coy, and has less straightforwardness than the man . . . and there can be little doubt as to the origin of the peculiarity. . . . The willy-nilly disposition of the female in matters of love is as apparent in the butterfly as in the man, and must have been continuously favoured from the earliest stages of animal evolution down to the present time. It is the factor in the great theory of sexual selection that corresponds to the insistence and directness of the male. Coyness and caprice have in consequence become a heritage of the sex, together with a cohort of allied weaknesses and petty deceits, that men have come to think venial and even amiable in women, but which they would not tolerate among themselves."

The type of character which leads to criminality is next discussed, and is shown by statistics to be strongly inherited. After a few pages on the allied topic of insanity, Mr. Galton passes on to consider the gregarious and slavish instincts, where he shows from first-hand observations on wild or but partly domesticated animals the immense utility of these instincts. We ourselves inherit from our savage ancestry instincts of the same kind, and thus it is that the less intellectually developed among us are so prone to submit ourselves, like sheep, to the guidance of a leader, and even to the tyranny of a despot.

Passing on to intellectual differences, a long and interesting account is given of mental imagery, the main points of which are already known to the readers of NATURE. It is remarkable that men of science, and of hard thinking generally, are for the most part totally deficient in this faculty. The discussion of mental imagery naturally leads to the resemblance which Mr. Galton has previously pointed out between his composite photographs and general ideas; each alike are "generic images," and in many matters of detail the analogy, or, as we should prefer to call it, the illustration, holds good.

Next we come to a chapter on Psychometric Experiments, which is devoted to an account of interesting experiments on the association of ideas. The influence of early association and sentiment is shown by these experiments, and by considerations drawn from them, to be much greater than is generally supposed.

One of the most interesting chapters in the book is that which next follows on the History of Twins. It will be remembered that the main fact elicited by this inquiry is that nature counts for much more than nurture; for it is shown that "instances exist of an apparently thorough similarity of nature, in which such difference of external circumstances as may be consistent with the ordinary conditions of the same social rank and country do not create dissimilarity. . . . The twins who closely resembled each other in childhood and early youth, and were reared under not very dissimilar conditions, either grow unlike through the development of natural characteristics which had lain dormant at first, or else they continue their lives, keeping time like two watches, hardly to be thrown out of accord except by some physical jar. . . . The effect of illness, as shown by these replies, is great, and well deserves further consideration. It appears that the constitution of youth is not so elastic as we are apt to think; but that an attack, say of scarlet fever, leaves a permanent

mark, easily to be measured by the present method of comparison."

The essay which follows on the "Domestication of Animals" is not so interesting, because not so original, as the rest of the book; all its points are obvious to any one who has thought about the subject at all.

A consideration of the Possibilities of Theocratic Intervention next leads the way to a reappearance of the author's paper on the Objective Efficacy of Prayer. Here the logic is unexceptionable as far as it goes, but it is not such as to leave no loophole of escape for orthodox belief. The argument is that if prayer is of any avail in an objective sense, it ought to admit of being shown by the statistical method to be so. But, as the present writer pointed out nine years ago when considering this essay, the statistical method applied to such a case is of doubtful validity. To show this we may quote one paragraph from our previous criticism:—

"What, then, is the whole state of the case? To illustrate it most fairly, we shall take the strongest of the examples supplied by Mr. Galton, viz. that of the Clergy. As Mr. Galton truly observes, in no other class are we so likely to obtain men of Prayer. Suppose, then, for the sake of calculation, that one-half of the clergy are sufficiently prayerful to admit of their petitions influencing the course of physical phenomena. Next, let us suppose that one-half of their successful petitions for physical benefits are offered on behalf of individuals other than themselves: this is equivalent to reducing the number of the prayerful clergy to one-fourth. Here we ought to add that in whatever degree this section of successful prayers may influence the prayerless classes of the community, in that degree is the comparison still further vitiated. Neglecting this point, however, let us lastly suppose that one-half of the petitions for physical benefits offered on the petitioner's own behalf are answered by physical benefits of some other kind; . . . this is equivalent to reducing the original number to one-eighth. Now I do not think any of these suppositions are extravagant. Let us see the result of applying them to Mr. Galton's tables. According to these tables, the clergy as a class live, on an average, two years longer than men of any of the other classes quoted, notwithstanding we are repeatedly told that, as a class, they are the most poorly constituted of all. Now, neglecting the last-mentioned point, and also the fact that all clergymen do not pray for long lives; still, even on the above data, an average of two additional years over all the clergy allows, when concentrated into one-eighth of their number, an average of sixteen additional years of life to every pious divine. Of course this illustration is not adduced in order to prove that prayer has in this case been observably effectual. The greater length of life enjoyed by the clergy may be conceded due to the cause assigned by Mr. Galton—viz. the repose of a country life—or to any other cause, without in any way affecting the present argument. All we are engaged in showing is that the statistical method is not a trustworthy instrument wherewith to gauge the physical efficacy of prayer; and the above illustration has been adduced to show that even if the petitions of the pious clergy for lengthened days were somewhat more effectual than those of Hezekiah, statistics would still be so far unable to take cognisance of the fact that the observable average increase of two years over the entire body of the clergy might reasonably be attributed to other causes. Yet length of days is perhaps the most conspicuous, and therefore the most easily tabulated, of all physical benefits for which it is possible to pray."¹

After some well considered remarks on Enthusiasm, or

¹ Burney Prize Essay on "Christian Prayer and General Laws," pp. 265-6 (Macmillan and Co., 1873), where other and more important considerations

"to what degree the strong subjective views of the pious are trustworthy," the book begins to draw towards its final object, which is virtually that of marking out the lines of what may appropriately be called a new religion. We have of late had so many manufactures of this kind that the market is somewhat glutted, and therefore it is very doubtful how far this new supply will meet with an appropriate demand; but we can safely recommend Mr. Galton's wares to all who deal in such commodities as the best which have hitherto been turned out. They are the best because the materials of their composition are honesty and common sense, without admixture with folly or metaphor. He says: "We may not reasonably profess faith in a common and mysterious whole, and of the laborious advance, under many restrictions, of that infinitely small part of it which falls under our observation, but which is in itself enormously large, and behind which lies the awful mystery of all existence." Having, then, this faith in the seen, and observing that, whatever the far-off divine event may be to which the whole creation moves, the whole creation is certainly moving in an upward course of evolution, Mr. Galton submits that man has now reached a level of intelligence which should enable him, not merely to know these things, but to do them. He ought to "awake to a fuller knowledge of his relatively great position," and begin to regard it as his high prerogative to cooperate with the unknown Worker in promoting the great work. He may infer the course that evolution is bound to pursue, and might therefore "devote his modicum of power, intelligence, and kindly feeling to render its future progress less slow and painful. Man has already furthered evolution very considerably, half unconsciously and for his own personal advantages; but he has not yet risen to the conviction that it is his religious duty to do so deliberately and systematically."

Several directions in which such assistance might be yielded are pointed out in the concluding pages of the book, especially in the way of "eugenics"; and there can be no question that, if the idea of promoting evolution could become generally, or even largely, invested with a feeling of obligation, the prospects of the race would be greatly brightened. The most important field of human activity under such circumstances would obviously be that of improving the race by selection, and Mr. Galton throws out several well considered suggestions as to the way in which this might be done without violating so precious a product of evolution as the moral sense, or seriously interfering in any other particular with the ordinary usages of civilised life.

We have said enough to show that in respect of its matter "Human Faculty" is an unusually interesting work; but we should not do it justice were we to conclude this brief notice without alluding also to its manner or style. There is a strand of humour woven through the serious texture of the whole, which, together with the ingenious cast of thought and the ingenuous cast of feeling, affords a most pleasing and instructive study, unconsciously presented, of the nature and nurture of an English man of science.

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against this application of the statistical method are given. [I may observe that this essay was written on a thesis which was set by the Vice-Chancellor of Cambridge, and I still think that, upon its given basis of Christian belief, all the more important of its arguments hold, both as regards prayer and miracles.—G. J. R.]