

no means so." Great lawgivers, the founders of beneficent religions, great philosophers and discoverers in science, aid the progress of mankind in a far higher degree by their works than by leaving a numerous progeny. In the case of corporeal structures, it is the selection of the slightly better-endowed and the elimination of the slightly less well-endowed individuals, and not the preservation of strongly-marked and rare anomalies, that leads to the advancement of a species.¹⁶ So it will be with the intellectual faculties, since the somewhat abler men in each grade of society succeed rather better than the less able, and consequently increase in number, if not otherwise prevented. When in any nation the standard of intellect and the number of intellectual men have increased, we may expect from the law of the deviation from an average, that prodigies of genius will, as shewn by Mr. Galton, appear somewhat more frequently than before.

In regard to the moral qualities, some elimination of the worst dispositions is always in progress even in the most civilised nations. Malefactors are executed, or imprisoned for long periods, so that they cannot freely transmit their bad qualities. Melancholic and insane persons are confined, or commit suicide. Violent and quarrelsome men often come to a bloody end. The restless who will not follow any steady occupation—and this relic of barbarism is a great check to civilisation¹⁷—emigrate to newly-settled countries, where they prove useful pioneers. Intemperance is so highly destructive, that the expectation of life of the intemperate, at the age of thirty for instance, is only 13.8 years; whilst for the rural labourers of England at the same age it is 40.59 years.¹⁸ Profligate women bear few children, and profligate men rarely marry; both suffer from disease. In the breeding of domestic animals, the elimination of those individuals, though few in number, which are in any marked manner inferior, is by no means an unimportant element towards success. This especially holds good with injurious characters which tend to reappear through reversion, such as blackness in sheep; and with mankind some of the worst dispositions, which occasionally without any assignable cause make their appearance in families, may perhaps be reversions to a savage state; from which we are not removed by very many generations. This view seems indeed recognised in the common expression that such men are the black sheep of the family.

With civilised nations, as far as an advanced standard of morality, and an increased number of fairly good men are concerned, natural selection apparently effects but little; though the fundamental social instincts were originally thus gained. But I have already said enough, whilst treating of the lower races, on the causes which lead to the advance of morality, namely, the approbation of our fellow-men—the strengthening of our

¹⁶ 'Origin of Species,' this edition, p. 78.

¹⁷ 'Hereditary Genius,' 1870, p. 347.

¹⁸ E. Ray Lankester, 'Comparative Longevity,' 1870, p. 115. The table of the intemperate is from Neison's 'Vital Statistics.' In regard to profligacy, see Dr. Farr, 'Influence of Marriage on Mortality,' 'Nat. Assoc. for the Promotion of Social Science,' 1858.

sympathies by habit—example and imitation—reason—experience, and even self-interest—instruction during youth, and religious feelings.

A most important obstacle in civilised countries to an increase in the number of men of a superior class has been strongly insisted on by Mr. Greg and Mr. Galton,¹⁹ namely, the fact that the very poor and reckless, who are often degraded by vice, almost invariably marry early, whilst the careful and frugal, who are generally otherwise virtuous, marry late in life, so that they may be able to support themselves and their children in comfort. Those who marry early produce within a given period not only a greater number of generations, but, as shewn by Dr. Duncan,²⁰ they produce many more children. The children, moreover, that are borne by mothers during the prime of life are heavier and larger, and therefore probably more vigorous, than those born at other periods. Thus the reckless, degraded, and often vicious members of society, tend to increase at a quicker rate than the provident and generally virtuous members. Or as Mr. Greg puts the case: "The careless, squalid, unambitious Irishman multiplies like rabbits: the frugal, foreseeing, self-respecting, ambitious Scot, stern in his morality, spiritual in his faith, sagacious and disciplined in his intelligence, passes his best years in struggle and in celibacy, marries late, and leaves few behind him. Given a land originally peopled by a thousand Saxons and a thousand Celts—and in a dozen generations five-sixths of the population would be Celts, but five-sixths of the property, of the power, of the intellect, would belong to the one-sixth of Saxons that remained. In the eternal 'struggle for existence,' it would be the inferior and *less* favoured race that had prevailed—and prevailed by virtue not of its good qualities but of its faults."

There are, however, some checks to this downward tendency. We have seen that the intemperate suffer from a high rate of mortality, and the extremely profligate leave few offspring. The poorest classes crowd into towns, and it has been proved by Dr. Stark from the statistics of ten years in Scotland,²¹ that at all ages the death-rate is higher in towns than in rural districts, "and during the first five years of life the town death-rate is almost exactly double that of the rural districts." As these returns include both the rich and the poor, no doubt more than twice the number of births would be requisite to keep up the number of the very poor inhabitants in the towns, relatively to those in the country. With women, marriage at too early an age is highly injurious; for it has been found in France that, "twice as many wives under twenty die in the year, as died out of the same number of the unmarried." The mortality, also, of hus-

¹⁹ 'Fraser's Magazine,' Sept. 1868, p. 353. 'Macmillan's Magazine,' Aug. 1865, p. 318. The Rev. F. W. Farrar ('Fraser's Mag.,' Aug. 1870, p. 264) takes a different view.

²⁰ 'On the Laws of the Fertility of Women,' in 'Transact. Royal Soc.,' Edinburgh, vol. xxiv. p. 287; now published separately under the title of 'Fecundity, Fertility, and Sterility,' 1871. See, also, Mr. Galton, 'Hereditary Genius,' pp. 352-357, for observations to the above effect.

²¹ 'Tenth Annual Report of Births, Deaths, &c., in Scotland,' 1867, p. xxix.

bands under twenty is "excessively high,"²² but what the cause of this may be, seems doubtful. Lastly, if the men who prudently delay marrying until they can bring up their families in comfort, were to select, as they often do, women in the prime of life, the rate of increase in the better class would be only slightly lessened.

It was established from an enormous body of statistics, taken during 1853, that the unmarried men throughout France, between the ages of twenty and eighty, die in a much larger proportion than the married: for instance, out of every 1000 unmarried men, between the ages of twenty and thirty, 11.3 annually died, whilst of the married, only 6.5 died.²³ A similar law was proved to hold good, during the years 1863 and 1864, with the entire population above the age of twenty in Scotland: for instance, out of every 1000 unmarried men, between the ages of twenty and thirty, 14.97 annually died, whilst of the married only 7.24 died, that is less than half.²⁴ Dr. Stark remarks on this, "Bachelorhood is more destructive to life than the most unwholesome trades, or than residence in an unwholesome house or district where there has never been the most distant attempt at sanitary improvement." He considers that the lessened mortality is the direct result of "marriage, and the more regular domestic habits which attend that state." He admits, however, that the intemperate, profligate, and criminal classes, whose duration of life is low, do not commonly marry; and it must likewise be admitted that men with a weak constitution, ill health, or any great infirmity in body or mind, will often not wish to marry, or will be rejected. Dr. Stark seems to have come to the conclusion that marriage in itself is a main cause of prolonged life, from finding that aged married men still have a considerable advantage in this respect over the unmarried of the same advanced age; but every one must have known instances of men, who with weak health during youth did not marry, and yet have survived to old age, though remaining weak, and therefore always with a lessened chance of life or of marrying. There is another remarkable circumstance which seems to support Dr. Stark's conclusion, namely, that widows and widowers in France suffer in comparison with the married a very heavy rate of mortality; but Dr. Farr attributes this to the poverty and evil habits consequent on the disruption of the family, and to grief. On the whole we may conclude with Dr. Farr that the lesser mortality of married than of unmarried men, which seems to be a general law, "is mainly due to the constant elimination of imperfect types, and to the skilful selection of the finest individu-

²² These quotations are taken from our highest authority on such questions, namely, Dr. Farr, in his paper 'On the Influence of Marriage on the Mortality of the French People,' read before the Nat. Assoc. for the Promotion of Social Science, 1858.

²³ Dr. Farr, *ibid.* The quotations given below are extracted from the same striking paper.

²⁴ I have taken the mean of the quinquennial means, given in 'The Tenth Annual Report of Births, Deaths, &c., in Scotland,' 1867. The quotation from Dr. Stark is copied from an article in the 'Daily News,' Oct. 17th, 1868, which Dr. Farr considers very carefully written.

als out of each successive generation;" the selection relating only to the marriage state, and acting on all corporeal, intellectual, and moral qualities.²⁵ We may, therefore, infer that sound and good men who out of prudence remain for a time unmarried, do not suffer a high rate of mortality.

If the various checks specified in the two last paragraphs, and perhaps others as yet unknown, do not prevent the reckless, the vicious and otherwise inferior members of society from increasing at a quicker rate than the better class of men, the nation will retrograde, as has too often occurred in the history of the world. We must remember that progress is no invariable rule. It is very difficult to say why one civilised nation rises, becomes more powerful, and spreads more widely, than another; or why the same nation progresses more quickly at one time than at another. We can only say that it depends on an increase in the actual number of the population, on the number of the men endowed with high intellectual and moral faculties, as well as on their standard of excellence. Corporeal structure appears to have little influence, except so far as vigour of body leads to vigour of mind.

It has been urged by several writers that as high intellectual powers are advantageous to a nation, the old Greeks, who stood some grades higher in intellect than any race that has ever existed,²⁶ ought, if the power of natural selection were real, to have risen still higher in the scale, increased in number, and stocked the whole of Europe. Here we have the tacit assumption, so often made with respect to corporeal structures, that there is some innate tendency towards continued development in mind and body. But development of all kinds depends on many concurrent favourable circumstances. Natural selection acts only tentatively. Individuals and races may have acquired certain indisputable advantages, and yet have perished from failing in other characters. The Greeks may have retrograded from a want of coherence between the many small states, from the small size of their whole country, from the practice of slavery, or from extreme sensuality; for they did not succumb until "they were enervated and corrupt to the very core."²⁷ The western nations of Europe, who now so immeasurably surpass their former savage progenitors, and stand at the summit of civilisation, owe little or none of their superiority to direct inheritance from the old Greeks, though they owe much to the written works of that wonderful people.

Who can positively say why the Spanish nation, so dominant at one time, has been distanced in the race. The awakening of the nations of Europe from the dark ages is a still more perplexing problem. At that early period, as Mr. Galton has remarked, almost all the men of a gentle nature, those given to meditation or culture of the mind, had no refuge

²⁵ Dr. Duncan remarks ('Fecundity, Fertility,' &c., 1871, p. 334) on this subject; "At every age the healthy and beautiful go over from the unmarried side to the married, leaving the unmarried columns crowded with the sickly and unfortunate."

²⁶ See the ingenious and original argument on this subject by Mr. Galton, 'Hereditary Genius,' pp. 340-342.

²⁷ Mr. Greg, 'Fraser's Magazine,' Sept. 1868, p. 357.