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On Man, and the Development of his Faculties, &c.—[*Sur l'Homme et le Développement de ses Facultés &c.*] By A. Quetelet, Secretary to the Royal Academy of Brussels. London: Bossange & Co.

AMONGST the infinite variety of circumstances by which man is surrounded in nature and in society, there are but few whose cause is sufficiently simple and direct to become matter of intuitive perception. By dint of long and painful study, a certain portion of these phenomena has been traced to causes operating by universal laws; which laws, being accurately ascertained, present a key, enabling the observer to calculate with the utmost precision the possible results of their agency. In a far greater number of cases, either so obscure or so complicated, as to elude the perseverance of the inquirer: the law of their activity remains unascertained; and no safe inference can be drawn as to its consequences in any given contingency. Man, however, by interest and by curiosity impelled to account to himself for whatever strikes upon his senses, invented an explanation of these last train of appearances, by referring them to an unknown and mystical principle which he christened Chance. To say that a thing has happened by chance, is, indeed, merely to say that it has happened because it has happened! The word, notwithstanding, has acquired, from use, a real and a philosophical meaning—either as a confession of ignorance, or as an abridged expression for an unknown formula. In this last sense, the value of a chance may become a fit subject for inquiry.

In the most obscure cases of chance agency, it is usually not difficult to discover the action of some one or more known and determined laws as an element of the complex causation; and, on the other hand, in the practical application of the purest theorems of science, the result rarely fails to be partially affected by the agency of some uncalculated item. Thus, in seeking to learn from the sun's altitude the position we occupy on the earth, we are enabled to calculate the astronomical causes on which the operation depends, to the utmost nicety; but a number of inappreciable causes—imperfection in the instruments, irregularity in the observer's powers, &c., prevent a perfect certainty in the result. In every complicated case, then, there are certain agencies which universally tend to produce an identical effect; there are others, accidental and variable in different instances, which tend to produce in each case a different consequence. In throwing the dice, there is at every throw the same (presumed) equality of the faces of the die, the same solidity of all parts of its substance, the same number of possible events. These all tend to produce the six separate faces of the die in every six throws. On the other hand, there are the endless varieties of force employed by the gambler in shaking and projecting the die, unknown inequalities in the die itself, in the table which receives it, &c. all tending to determine the throws in a series altogether irregular. In any one fair throw, the action of the last set of causes so far overmasters that of the first, that it is impossible to determine what will be the event, scientifically, and not as a mere accidental guess. It is found, however, by observation, that, in the long run, the reverse is the fact; that the constant causes predominate over the accidental; and that,

by embracing a long series of events, an average result may be obtained, which will very nearly approximate to what from theory should happen were the constant causes alone in operation: for the unknown and varying forces are not the less under the influence of laws, because we cannot comprehend them; and the effects which they produce are consequently placed within some limits, so that in some undefined series of events, their eccentricities must be exhausted, and must balance and neutralize each other.

Thus, to go back to the instance of the sun's altitude:— in any one observation, it may happen, from a momentary defect in the powers of attention, from an accidental awkwardness in managing the instrument, that there shall arise a considerable error. But if a great number of persons perform the same operation, the probability is, that their several errors will be of different sorts, and that the mean result of all the operations will, therefore, be a close approximation to the truth.

The application of this mode of seeking after certainty, and reducing hazard to a determinate law, has long been applied by gamblers to the events of games of chance; and by insurance companies, to determining the probable duration of human life, and the still more incalculable chances of fire and shipwreck. In the latter instance, it seems at first sight absolutely impossible that, the action of elements, so proverbially inconstant, should be reducible to any rule: yet so much otherwise is the fact, that though particular underwriters may in any given year be ruined by some great storm wrecking particular fleets of large value, the general business of an underwriter is as certainly prosperous as any other branch of industry; while competition keeps down the rate of insurance very closely to the real extent of the risk.

This degree of certainty having been reached where accident seems to reign exclusively, it is not surprising that philosophers should have been tempted to apply so available a method to the appreciation of physiological and social facts, and to the assignment of the laws which regulate the "development of man." Accordingly, of late years, a great variety of particulars, relative to the individual and to society, have been subjected to this method; and a considerable increase of positive knowledge, (not otherwise obtainable) has been acquired. The work before use embraces whatever has been most satisfactorily demonstrated in this way, together with the results of a vast many inquiries, instituted by the author himself, and a comprehensive view of the entire philosophy of the subject, calculated to guide future inquiries in their researches, and to give a determined direction to moral and physiological statistics, such as may render them a positive and practical science.

Upon the most superficial view of the organized structure of man, of the modes of its action, and even of the most complex itself, it will be found that there are certain particulars which may be considered as fixed; while there are others which may admit of considerable variation in different individuals. Thus, every perfect man has a heart, lungs and stomach, two hands, and two feet; but every man has not the same complexion, stature, weight, &c. All men can run and walk, lift weights, digest alimentary substances, &c. &c.; but all men cannot exert equal forces, nor digest all aliments equally. So, too, all men love

and hate, desire to possess what is good, and to avoid what is evil, and to turn the elements that surround them, (to the extent of their knowledge and power,) to the purposes of self-preservation; while scarcely any two exhibit those propensities in the same kind and degree. A very slight and superficial observance of the species had taught philosophers, that such variations were confined within narrow limits; and had enabled them to form an abstract conception of an imaginary being termed “man,” of whom a long series of propositions were applicable, though not strictly and rigorously predictable of any one individual man. But while no particular human being is found precisely identical with this imaginary “man,” yet, in any number of men taken at hazard, there will be observed a manifest tendency to approach to it: and, the larger the number, the more close will be their average approximation to that standard. Now, as it is manifest that no general rules could be formed for the separate government of each man in society, applicable to his individual nature, or, in other words, that each man should be suffered to be his own law, it follows that a perfect and complete determination of the attributes of this abstract being is an essential preliminary to an efficient discharge of the task of legislation; and it is a matter of experience, that false and superficial notions of human nature have introduced some of the most fatal errors in the social institutions of nations. If, therefore, the application of a scientific method of investigation shall succeed in giving a greater precision to the received ideas of this point, a vast and important advantage will be obtained for the species.

Of the many circumstances hitherto attributed to human nature, a considerable portion are assigned upon a coarse and rude observation; and others are assumed from refined speculations *à priori* upon the supposed constitution of the animal. The latter have been the subjects of endless dispute, and the causes of some of the most acrimonious contentions that have disturbed the peace of society. Of those, the discussions on free will and necessity are a prominent instance. It is, perhaps, too much to expect that any extent of observations will suffice to silence such disputes; and it is but too probable that if such a result were presumable, the expectation would only serve to discredit the inquiry. Without, however, looking to the possible attainment of this perfection, it is abundantly clear that the old methods of seeking to establish the true nature of the abstract man, which is the subject of legislation, have proved insufficient to their purpose, and that, therefore, the method of investigation embraced by the term Statistics, would be worthy of all attention, although its application had been attended by discoveries far less striking and satisfactory than those with which works of the description of M. Quetelet’s have made us acquainted. It is no small matter to have ascertained that from amidst the chaos of individual actions, whose sum embraces what we mean by human life, there arise as the result of every long series of observations, for the species at large, an order and progression of moral cause and effects sufficiently precise to become the subject of general reasonings, and the matter of general regulation; so that definite and precise consequences may be foretold of definite combinations of antecedents. Nor is it any objection, that after many very accurate, but, perhaps, still insufficient observations of fact, individuals have been tempted by an instinctive

desire of obtaining positive results, to generalise hastily, and have drawn false conclusions. Such errors are inevitable in the progress of all sciences; but as long as the observations on which they are founded subsist, they may become, in the hands of subsequent inquirers, the materials for better and more logical investigation. Thus, for example, it has been statistically established by M. Guerry¹, that in certain parts of France, crimes against property are more predominant than in others; and it has been further shown that these provinces were precisely those where education most abounded. Hence it was inferred that education was a cause of the commission of this species of offence. The fact thus ascertained is not the less a fact for having become the basis of an illogical conclusion: and subsequent reflexion showing that those provinces are likewise the richest and most active parts of the empire, renders it evident that the education and the crime are not cause and effect, but concurrent effects of a common cause. The legitimate conclusion is, that in the rich provinces the matter of dishonesty is more abundant, and that, consequently, in the more usual language of morals, the temptation is greater. Such errors as these are of daily occurrence in the application of the best established laws; but they are particularly to be expected in the investigation of a subject so complicated as the moral nature of man. They are still, we repeat it, but so many steps to the discovery of the real relations of things: they are, in fact, errors necessary to the attainment of truth.

The mode of investigation employed by M. Quetelet, in his estimate of the human faculties, is the same as that adopted in the formation of tables of mortality, which form the basis of life-insurance policies. The particular subject being chosen, (suppose the weight of children at birth,) a considerable number of instances (and the more considerable the better) are taken, the individuals are weighed, and the result is entered in a tabular form, by which the extreme limits, the mean average, the proportion in which individuals deviate from it in various degrees, are easily ascertained. Every such item, moreover, is capable of being influenced by a variety of external causes; and the subject, accordingly, requires to be studied in relation to those causes; when all these have been examined, and the facts noted, the subject is exhausted, and the average conditions of that subject very rigorously demonstrated.

Among the various particulars on which information is required, some are capable of direct reference to known standards, as of weight, measurement, monetary systems, &c.: others are cognizable only by their effects. Where these effects are rare physical, we have only to adopt the admitted supposition that effects are proportionate to their causes, and an indirect measurement of this last class is no less easily attained than of the first; only greater attention is required in ascertaining the identity of the circumstances in which the forces to be measured are exerted. With regard to moral qualities, the means of reducing them to calculation are less immediately obvious; and M. Quetelet is probably the first philosopher who has made the attempt. Wherever the manifestations of a moral quality are not purely physical, they cannot be the

¹See *Athenæum*, No. 303.

subjects of measurement. The number of books or pictures produced is no test of the powers of the author. So, the courage, the virtue, the prudence of different individuals cannot, by direct observation, be reduced to numbers. The imputed absurdity of applying numbers to these cases, is thus treated by the author.

Suppose two individuals in the daily opportunity of performing acts of courage with an equal facility; and suppose that, yearly, one of them performs 500 such acts, and the other 300. Now, though these acts may each have a different specific value, yet, (the two individuals being placed in like circumstances,) they may be regarded as collectively alike—in both cases.

This being admitted, and also, that causes are as their effects, there will be no great want of reason in assigning to these individuals courage in the proportion of 500 to 300, or of 5:3; and this mode of appreciation would bear a greater character of truth in proportion as the observations extended over a greater number of years, and as the results varied within narrower limits. The absurdity of such a calculation, then, must be looked for in the impossibility, first, of placing the two men in a position equally favourable to the manifestation of their courage; secondly, of taking an exact account of their conduct; and, thirdly, of collecting a sufficiency of such observations as would insure the least possible aberration from truth; or, in other words, the proportion is only absurd, in so far as its conditions are impossible to realize.

But, suppose that these two individuals were Frenchmen, and represent, the one, the mass of Frenchmen between twenty-one and twenty-five years of age, and the other, those between thirty-five and forty; and suppose that instead of acts of courage, the question was concerning dishonesties, subject to the judgement of the criminal tribunals; then, there is reason for believing that the general tendency to theft is (in France), as regards men of these respective ages, in the proportion of five to three; and we may also conclude, that the men from twenty-one to thirty-five (who are, by the population returns, about as many as those from thirty-five to forty) are in possession of an equal facility in indulging their propensities to theft, and that the cases adjudged are of equal gravity in both instances. * * *

In this case we may say then, first, that the individuals are very nearly placed in the same circumstances; secondly, that if we do not know the acts of theft they really commit, at least we know the probable ratio of their propensity; thirdly, that this ratio is the more worthy of confidence, because it is the result of many years observations, and that it varies annually within very narrow limits. * * We may, therefore, regard, as highly probable, that the disposition towards theft of our two individuals, is very nearly what theory represents it, at least as regards France in its actual condition.

If then, in a more perfect condition of society than the present, the same pains were taken to register acts of courage and virtue, as now are taken with acts of criminality, would not the means exist of measuring the relative degrees of these qualities at the different epochs of life? The imputed absurdity, therefore, of attempting to determine this relation for the average man, is more apparent than real, and depends on the impossibility, at present existing in the actual conditions of society, of procuring the necessary elements for the calculation. *

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For the rest, it is sufficiently clear that this result could not be obtained by a direct comparison between two individuals, because the facts would not be numerous enough to warrant confidence in the conclusion, and because the individuals themselves might vary during the course of the examination. This is not so with the abstract average man, concerning whom many observations may be collected in a short time. We could not, by a comparison between two men, one of from twenty-one to twenty-five, the other from thirty-five to forty, determine their relative propensities to theft under equal circumstances, because this propensity might not have been revealed in a single overt act during the whole course of the observations; which is not so, when a large number of men of the same age are the subjects of examination.

It is sufficiently obvious that, as these conclusions are not attainable by a direct examination of two individuals, so they are not applicable to an individual case of comparison. If, for example, it were a question between two servants of twenty-five and of forty-five respectively, and that there were no other criterion of their honesty than that of their ages, it might be prudent to choose the elder man on the general principle; but the probability of error in doing so would be very great indeed. But if, in the choice of a hundred servants, we were reduced to the same necessity, there is a probability of five to three that we should benefit by abiding by the rule. Although, therefore, the ascertained properties of the abstract average man can never be supposed to belong to any individual, this will still be the best rule for measuring the condition of society, as long as circumstances continue the same.

Circumstances, however, change in the same societies with the lapse of ages, and are different in different societies; and in these instances, the average and abstract man will have qualities proportionally different. Philosophy, therefore, in its estimates of human nature has need of a repetition of the steps of the process; and, as it judges of a society by observations on the constituent individuals, so, to obtain a perfect knowledge of human nature, it must compare societies in all ages and climes. For constructing tables to this end, not even the smallest elements yet exist.

We have only further to observe that, in this search after the average man, there is nothing new. The very phrase, "human nature," implies that there is a nature common to all, and distinct from that which exists in each individual, and such words as *dwarf*, *giant*, *precocity*, *genius*, &c., implying exception, imply also a rule to which that exception refers. The novelty, if novelty there be, lies only in the attempt to substitute precision for vagueness, and in seeking in direct observations for the characteristics which have heretofore been principally deduced, *à priori*, from theoretical principles.

From a consideration of these preliminaries, such of our readers as have honoured them with an attentive perusal (however previously unacquainted with the subject) will be able to form some estimate of the vast importance of the work under consideration—of the large field of inquiry it has opened—and of the value of the conclusions that may be drawn from it in the business of education, legislation, and in the many estimates of conduct and contingencies connected

with the daily concerns of life. For example, in the case of an inquest on a child, found dead, when it is desirable to ascertain the fact of its having been born alive, and at the full term of gestation, as a preliminary to a judgement on the probable guilt of the mother in abandoning it, an increase of security would be attained, if, in addition to the purely physiological circumstances to be collected from inspection, were adduced the comparison of its weight and stature with those assigned to the average child at the hour of birth of the country in question. So, likewise, if a man be found killed, and nothing decided offers itself to explain the fact, the known average ratio of suicides to murders in the general population, would indicate the degree of probability of his having destroyed himself: and the ratio of suicides in persons of the same age and sex as the victim would give an additional degree of precision to the conclusion. In France, the ratio of suicides to murders is as 48:20, or nearly as 5:2. Supposing, therefore, that there are marks of violence on a French corpse, which might have arisen equally from either cause, it is five to two that no murder has been committed; but if the victim is of an age at which suicides are rare, the probability of murder would be increased; whereas, in the contrary case, of the age being that at which suicides are most frequent, the probability would be much reduced.

This probability may perhaps be thought very insufficient ground for a decision of the whole case; but as a *probability*, to be set against *any other probability* in the attendant circumstances, it is entitled to weight.

In a subsequent notice we propose to enter more minutely into the details of these very interesting volumes.

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On Man, and the Development of his Faculties, &c.—[*Sur l'Homme et le Développement de ses Facultés &c.*] By A. Quetelet, Secretary to the Royal Academy of Brussels. 2 vols.

[Second Notice.]

IN our former notice of these volumes, it was attempted to convey to the general reader an insight into the philosophical principles, on which the author has proceeded in his inquiries. We shall now notice some of the more striking results; first, however, promising a word concerning the value of statistical tables, or the credit which is due to their conclusions. The doctrine of probabilities depending on the domain of constant causes over those which are variable and accidental, it follows that the number of instances to be compared must be considerable, before any conclusion can be obtained that is worthy of confidence. At every extension of the data, the value of the consequence rises; and, all other circumstances being equal, M. Quetelet states that the probability of truth is as the square of the number of observations. The value of a table is likewise affected by the skill and accuracy of the observer by whom it is constructed; a bad observation being capable of leading to positive error, which is worse than

absolute ignorance. Of these sources of doubt, it is to be observed, that the insufficiency of data is a circumstance that declares itself; and the reader has only to carry in his mind the relative number of instances stated in any two discordant tables, to decide on their respective trustworthiness. The comparative accuracy of different observers can only be collected from internal evidence of the pains taken to avoid error, and of the general capabilities of the parties.

Although every new series of observations must necessarily add to our knowledge, either by coinciding with and strengthening foregone conclusions, or by widening the field of inquiry, or by placing it in new points of view, yet any considerable series that exhibits a mean result from which the maximum and minimum departure is in no case very wide, may be regarded, with safety, as offering a near approach to the truth. This probability is much increased, when the average of tables, constructed under various circumstances, and by different observers, coincide, or differ only by trifling quantities. In the first tables quoted by the author, it appears from an examination of fourteen millions and a half of births registered in France during a lapse of fourteen years, that the average number of male births to female was as 106.38 to 100, and that the annual departure from their mean result was extremely trifling. The accuracy of this average is, therefore, highly probable; and the justice of this inference is still further confirmed by another table, in which thirty of the southern departments only were tried, and the result found was 105.95 to 100—a deviation from 106.38 remarkably small.

But when the author proceeds to inquire into the effect of climate on a more extended scale, in influencing the proportion of the sexes born in different countries, he is obliged to depend upon data taken from different sources, and, in all probability, of very unequal accuracy; the condition is thereby divested of some degree of *prima facie* likelihood. It appears, however, that in a table embracing sixteen of the different states of Europe, collected from different authorities, the average result is exactly as 106 to 100; and this close approximation to the cipher afforded by the French tables, re-establishes our confidence in the fidelity of the process. It may be concluded from this and other similar instances, when every care has been taken to reject such documents as are manifestly erroneous, and to use the best evidence attainable of statistical facts, that the smaller differences in the value of tables, arising out of a more or less accurate registration, will balance and neutralize each other, and may be safely disregarded. Although, therefore, the mental qualities, opportunities, &c. of different observers are elements not subject to numerical estimation, yet, like, any other accidental and disturbing causes, they will disappear, whenever the series of observations is sufficiently extended. All, then, that is necessarily to the attainment of truth, is the adequate multiplication of observations, under every imaginable variation of circumstance, until an average is obtained from the whole, from which the individual departures lie within the narrowest limits.

M. Quetelet commences his researches by the investigation of physical facts, as being most easily appreciable in numbers. After examining the general proportion of male to female births, he proceeds to inquire into the external circumstances by which this proportion may be partially affected; and it

appears, from a number of male births is relatively less predominant in cities than in agricultural districts, and less too among illegitimate than legitimate children. A table, constructed by Mr. Babbage, of observations made in France, Naples, Prussia, Westphalia, and Montpellier, gives a mean average of 105.75 boys to every 100 girls born in wedlock; while to the same number of female illegitimates, the males are but as 102.50 to 100.

Of still-born children, the proportion of boys predominates over that of girls; and that of illegitimate over legitimate children. At Gottingen the still-born legitimates were 3 per cent. on the whole births; while that of the illegitimates extended to 15 per cent. The probable causes of this disparity are the agitation of the mother's passions during pregnancy, the greater physical and social difficulties of her situation, the low rank in life in which this species of vice predominates, together with the greater probability of direct efforts to produce abortion. The fact is a striking illustration of the penal consequences, with which nature itself has surrounded sexual impurity, and of the decided worldly advantage attendant on the observance of the moral law.

In Chapter V. our author takes up the subject of mortality. In the north of Europe one death occurs for 41.1 inhabitants; in the centre, for 40.8; in the south, for 33.7. But, if England be excluded, the mortality of central Europe would be the lowest; indicating the general superior wholesomeness of temperate climates. Excess of heat seems to be a cause of shortening human life; but it must not be forgotten that in the countries near the line, a defective civilization combines with temperature to exaggerate the results.

Upon the value of the average duration of life, in determining the relative prosperity of nations, M. Quetelet has some excellent remarks:- "It may be said, that a nation is increasing in prosperity when it produces fewer citizens, but preserves them longer. This condition is entirely to the advantage of the population; for if the numbers born are smaller, the useful subjects are more abundant, and the generations are not so frequently renewed, to the injury of the state."

"Man, in his early years, lives at the expense of society. He contracts a debt, to be repaid at a future day; and if he does not live to discharge it, his existence has been a burthen to his country. To estimate this expense, it is sufficient to state that a child, from its birth till it attains to twelve or sixteen years, cost in the year 1821, in the hospitals of the Low Countries, 1110 francs²;—say, however, only 1000 francs. Every individual, then, who survives infancy, contracts a sort of debt, which cannot, at least, be less than 1000 francs—the sum thus paid by society for each infant, when abandoned to charity. In France the annual births amount to 960,000, of which 9/20 die, before attaining to a serviceable maturity. These 430,000 unfortunates may be considered as so many strangers, who, without fortune or industry, take part in the general consumption, and depart without leaving any other trace of their passage, save eternal regrets. The *expense of their maintenance, without reckoning the time*

²This sum is inexplicably small. It probably is the average cost of the entire inmates of these establishments, of whom a large majority die in the first years of their admission

they have pre-occupied, represents the enormous sum of 432 millions of francs. If we consider, on the other hand, the grief that such losses must occasion, which no human sacrifice can compensate, it will be perceived how important a subject they afford to the consideration of the legislator and philosopher. It cannot be too often repeated, that the propensity of states consists less in the multiplication, than in the preservation of their component members.”

This reflection gives a new item in the long account between mankind and their governors, on the score of useless wars, by which so many are cut off at the moment of their incipient utility, and the greatest possible waste is occasioned of the national resources. In connection with this subject, we quote a remark of the author, that “there exists a fixed relation between mortality and fecundity, or that the number of births is regulated by that of the deaths.” In a certain sense this is true; for, supposing an epidemic to have thinned a population, it is to be presumed that the next generation will marry earlier and in greater numbers: but, as a general proposition, it should seem that the deaths are rather to be considered as a dependency on the births, than as a cause of their increase. One great cause of a large mortality in any population, is the hardship which surrounds infancy, among the lower classes. Now, such hardship must obviously increase, as the circumstances of the poor deteriorate, and *vice versâ*. But an undue increase of population is a leading cause of this deterioration; and, therefore, an excessive increase in the cipher of births, will generally produce a corresponding increase in the cipher of deaths. In this matter, however, when all things are considered, there may be a recurrent cycle of causes and effects.

“At Vareggio, (says M. Bossi, in his ‘Statistique du Département de l’Ain,’) in the principality of Lucca, a small number of inhabitants, in a deplorable state of misery and barbarity, were from time immemorial annually attacked with intermittents. But in the year 1741 sluices were constructed to oppose the entrance of the sea into the low lands, which had been previously flooded on the recurrence of high tides and tempests, the marshes disappeared, and with them the fevers; and at present this canton is one of the healthiest, most industrious, and richest spots on the Tuscan coast; and the vigour, longevity, and moral character of the people, are all proportionately improved.”

“So also,” according to M. Villermé, ‘in the Isle of Ely, from 1813 to 1830, of 10,000 deaths of all ages, 4731 occurred before the attainment of the tenth year; while in the other agricultural districts the average was but 3505: and between the ages of ten and forty, the deaths in Ely were 3712, while the general average, as before, was only 3142.’”

Here is to be observed, the concurrence of a direct morbid cause of mortality, with an indirect social agency, dependent on the poverty and destitution of the population. In this case, it is likely that the malaria, in carrying off its contingent, merely supplied the place of a variety of other diseases, the usual concomitants of hardship, which would have acted, had the population been simply overstocked, and the district been naturally healthy. Accordingly, the same author, from a series of observations made at Paris, has come to a conclusion, that wealth and poverty in the different arrondissements of that city, are more influential upon the duration of life, than all the circumstances together

which may be considered as capable of affecting the climate of specific localities.

In his inquiries on the influence of sex upon mortality, M. Quetelet states that “there exists a peculiar cause of mortality, which presses on male infants before and immediately after birth. Of the still-born, the number of males is as 3 to 2; while, between birth and the completion of the two first months, the mortality is as 4 to 3, nearly; and during the three following months as 5 to 4.

“From fourteen to eighteen, the mortality of females increases; between twenty-one and twenty-six, that of the male; and from twenty-six to thirty (the average epoch of marriage,) the deaths are equal; but during the period of fecundity, the female mortality again sensibly increases; and after that time it again diminishes, so that the deaths of the two sexes subsequently occur in the proportion to the respective actual numbers then surviving.”

From those results, it may be concluded that the law of developement, in the two sexes, is not precisely the same, a fact of which we have physiological evidence. There is nothing in external circumstances, to explain the early mortality of the males. The increasing mortality of females, towards puberty, is more easily accounted for, partly by physiological causes, and partly by errors in the management of female youth. The decrease of mortality among old women is probably a consequence of the stronger animals only surviving the accidents of earlier life.

In touching on the influence of peace and war, M. Quetelet justly remarks, that statistical tables may lead to false conclusions, if employed without due consideration. Of two countries, for example, in a state of war, one may suffer during its continuance by actual losses in battle, fatigue, and privations, and by a consequent diminution in the chances of marriage, or in the importation of corn; while another may not be sensibly affected by any of these calamities. Mr. Sadler, deceived by the statistical tables concerning England, is led to deny the influence of war; whereas a comparative table of deaths, births, and marriages for Belgium and Holland, during ten years before, and ten years after the peace of 1814, shows that the precise reverse was the truth in that country.

With respect to the influence of wealth on mortality, Mons. Quetelet notices the fact, “that of the persons insured at the Equitable Society, a class eminently at its ease, only one in 81.5 died during the year 1800; while, on the contrary, among the black slave population, one out of every five or six perish annually; the general mortality of the negro soldiers in the British army being only one in 33.3.”

On this head, the author most judiciously observes, “the word riches requires explanation. A great abundance of wealth is often only a means of indulging the passions in excess. The most favourable condition of a people is that which affords it the real means of providing for the real wants of nature, without intemperance, and without the creation of factitious wants. In general, therefore, as Mons. de Tracy observes,³ the people are, in this sense, richer in nations

³Commentary on Montesquieu’s ‘*Esprit des Lois*,’ chap. xvi.—We take the opportunity of recommending this work, of a profound and original thinker, to the English public. Whether a translation would *pay*, may be a matter of doubt; but a translation is wanting to our literature; and some one of the knowledge-diffusing political societies could not employ its money to more

that are counted poor, than in those esteemed wealthy. In England, the richest of nations, a large portion of the population subsists on charity. The rich provinces of Flanders, in like manner, count more paupers than Luxembourg, a province where great fortunes are rare, but where the population at large is in a state of ease. The same is the case with Switzerland, and generally with most agricultural countries.”⁴

At page 220 are some curious facts respecting the influence of professions on mortality, collected by Dr. Caspar, of Berlin, from which it appears, that “head work is more injurious than bodily labour; but that the combination of the two is the most wearing. A sedentary life, free from all excesses, is, on the contrary, the condition most favourable to life.” “Of all professions, that of a physician, according to Dr. Caspar, is the most wearing; while that of the divine occupies the other extreme of the scale. Of 100 divines, 42 reached 70 years and upwards—of 100 physicians, 24 only attained that age.—Of a thousand deaths, between the ages of 23 and 62 inclusive, the years of greatest professional activity, there were—of physicians, 601—of divines, 345.

In p. 233, is a table taken from the observations of Messrs. Baumann and Süßmilch, showing that the deaths of illegitimate children born who arrive at maturity, are, to that of the legitimate, as 12.3 to 7; and it further is collected, that not more than a tenth of the illegitimate children born arrive at maturity. Mons. Benoiston de Chteauneuf, in his Considerations on Foundlings, is quoted at p. 233, for the astounding fact, that of 19,420 foundlings received during 20 years into the hospital at Dublin,⁵ only two thousand were remaining alive at the end of that term. The following, taken from the tables of Mons. Gouroff, is conclusive as to the mischievous effect of Foundling Hospitals on the morals of a people: “Mayenne, from 1799 to 1811, had no establishment were taken indiscriminantly; and in that period, thirty infants only were exposed. Napoleon established a ‘*tour*,’ or machine for receiving children, without discovering the exposer; and between November 1811 and March 1815 (when the Duke of Hesse Darmstadt suppressed it) 516 infants were received. In the nine following years, the number of exposed was again reduced to nine. The same authority states, “that the mortality in foundling hospitals is frightful, while infanticide is scarcely prevented by their institutions, and that the destruction of human life they occasion is out of all proportion to the numbers they rescue.”

From certain tables of helpful practice in England, it appears that there dies one patient in 16—In the Htel Dieu one in 6.8—In the Pit one in 8.2—In the Imperial Hospital, Petersburg, one in 4.5—In San Mateo, at Pavia, one in 10.7—In the clinical wards of Prof. Tommasini, at Bologna, one in 7.7.

On this subject, Mr. Hawkins states that the relative mortality rarely depends on the treatment. A friend took notes of the mortality under three physiological advantages than by undertaking the task.

⁴We forbear to draw the political consequences of this statistical truth. They merit, however, the serious attention of a nation in which so many institutions tend powerfully to promote the concentration of property into a few hands.

⁵See report of the proceedings of the Statistical Section of the British Association, in this day’s *Athenæum*.

cians, in the same hospital. One was an eclectic, one an expectant practitioner, and the third a follower of the tonic system. The mortality was the same in each instance; but the duration of the diseases, and the nature of their convalescence differed very widely. It is probable that a more extended table would make the deaths more proportionate to the protracted duration of the convalescencies.

Relative to the effect of institutions on mortality, we find that at Velvorde, a Belgian prison, there died in 1802, one prisoner in 1.27 [!] of the mean population of the establishment—while, in 1817, the deaths were reduced to one in 30.36. “One may judge,” says Mons. Quetelet, “from what has been stated, whether man, delivered to himself, and yielding to every excess, could, in any state of society, aggravate his mortality more, than a negligent and ignorant administration has often done. Never, in the most dreadful plagues, in the most destructive wars, was the mortality equal to that at Velvorde, at the beginning of the century.”

On the general question of population, Mons. Quetelet agrees very closely with the views of Malthus, which he reduces to the following formulæ:- “Population tends to increase in a geometrical ratio. The sum of the obstacles, which are opposed to this tendency is, *ceteris paribus*, as the square of the rapidity of actual increase,”—another instance of the analogy often found to subsist between mechanical laws and those which govern human action. “Never, therefore, can population advance so rapidly as to strike with violence upon its utmost possible limit. In approaching that limit, the obstacles must multiply too rapidly to admit of a shock. Nature will, it is true, levy her tribute of deaths in proportion to the nearness of approach; but, that debt being paid in detail, it will be sensible than if levied at once.”

This is the actual state of most European populations. A large tribute of deaths is taken, by crime and privation, but destructive famines are rare. Among many curious and refined observations respecting the the inferences to be drawn from the population, we find the following:—

“There is a difficulty which merits particular attention, for the importance of its solution to many questions of statistics and political economy; it relates to the inquiry whether two populations may not have the same ratio of births to deaths, and yet have two different durations of life resulting from a difference in the order of mortality, in relation to the ages of the defunct.

“Suppose, for greater simplicity, the same people to have annually the same number of births and deaths, if, at the end of one year a table were constructed, the average mean duration of life might perhaps be thirty years. The next year, the mortality occurring in the same manner, and in the same proportions, would give the same result. But if the list of deaths for the second year, a child of one year old were substituted for a man of forty, which would not alter the ratio of deaths to births, the mean average of life would be shorter, because there would be a loss of thirty-nine years. But by this change, thought the mean average was lessened, society would be a gainer; because a useful man was preserved in place of an expensive infant.

“This serves to prove how much we should be on our guard against calculations of the mean duration of life, made on a small number of annual observa-

tions, and concerning a people either prospering or declining.”

It shows, too, the folly of depending on this criterion alone, for estimating the prosperity of a nation.

The subject of population concludes the first volume. The contents of the second and more important, we shall reserve for a third notice.

From *The Athenæm*, 29 August 1835, pp. 658-661.

On Man, and the Développement of his Faculties, &c.—[*Sur l’Homme et le Développement de ses Facultés &c.*] By A. Quetelet, Secretary to the Royal Academy of Brussels. 2 vols.

[Third Notice.]

PASSING over such parts of M. Quetelet’s work as treat of certain physiological properties of man, such as his stature, weight, physical force, &c., in favour of newer and more interesting matter, we arrive at his chapters on the ‘Development of the Moral and Intellectual Qualities.’ This, which is the most original part of the essay, presents phenomena of great interest to society—phenomena which, in this country at least, have hitherto been little studied; but which are now occupying considerable attention among statistical inquirers.

The first chapter treats of the development of the intellectual faculties, and commences with an account of the mode in which the author proposes to investigate the facts.

The field (he observes) is immense; and, in the present state of the science, little more can be offered than a few simple indications, which may serve as landmarks to denote the first attempts at taking possession of the subject. * * * The intellectual faculties can only be appreciated by their effects, that is, by the actions or works they produce. In attributing to a nation, as to an individual, all the works which it has produced, we may judge of its fecundity and intellectual force, as compared with those of any other nation; abstraction being however made of the obstacles which have impeded their respective energies. Then, again, by taking an account of the ages at which the several authors produced these works, we have the necessary elements for estimating the law under which their intellectual powers were developed. To render this knowledge more precise, a classification should be made of the different sorts of productions, such as musical, mathematical, literary, philosophic, &c., by which we may arrive at the general conclusion. The inquiry should be extended from nation to nation to determine how far the development of the faculties is affected by the influence of localities.

As an example of what may be effected in this way, the author tries the dramatic talent of France and England by observations on the chefs-d’œuvre of forty-seven French authors, and twenty-four English, taken respectively from ‘Picard’s Repertoire,’ and the ‘British Theatre.’ In attributing to the works of these authors equal literary value, there is an obvious inaccuracy; but, though they all vary amongst each other in poetic merit, &c., yet it is to be supposed

that the variation is not greater on the French side, than on the English; and that, therefore, the accuracy of the general conclusion is not affected by the error. The whole works of these authors are arranged in tabular form, and from this table it appears that, in both countries, the dramatic talent does not show itself before the age of twenty; that between twenty-five and thirty, it exists in considerable intensity, and goes on increasing till fifty or fifty-five. From that age it undergoes a sudden and abrupt declension, which would be more marked, if the quality of the works were taken into consideration, as well as their numbers. In comparing the two nations, there is an apparent advantage on the side of England, on the point of superior precocity; but this, the author is inclined to attribute to the manner in which the numbers were obtained, and to the difficulty which French authors have experienced in getting their works represented in the theatre.

Another curious fact (says Mons. Quetelet), obtained from the tables which I have constructed, is, that tragic talent shows itself earlier than comic. The finest comedies on the French stage were not produced till the authors had attained to between thirty-eight and forty years of age, nor is there a single work belonging to *la haute Comédie*, which was written earlier than at thirty.

The author appears to attribute this relative precocity of tragic talent to its nearer connexion with the epoch of exultation of the passions; but, to us, it seems clear, that comedy, turning, as it does, on the ridicules of society, requires a longer knowledge of the world, and a better-worked intellect, for its production, than tragedy—which depends chiefly on that which is most general in human nature, and may be learned from books.

In order to determine the point (he adds), the best method would be, to trace the law which governs the developement of talent in respect to music, painting, and whatever else tends to call the passions into play; and to study, on the other hand, those faculties which seem the least connected with imagination and the passions. It will appear in the subsequent pages, that the age of twenty-five is the epoch of the maximum energy of the passions; so that, if there be an art which depends on that energy, and does not require great previous acquirements, its maximum must also appear about the age of twenty-five. The intellectual faculties arise, increase and decline in the progress of life; and each attains its maximum at a determinate epoch. It would be important to determine the extreme limits of this scale—namely, the faculty which arrives the first to maturity, and that which is the latest at its maximum; because these would necessarily be simple, and totally independent of all collateral causes.

Under the head of mental alienation, it is remarked, that “if it be true that lunacy follows the developement of the intelligence, that fact will afford a measure of the accuracy of the preceding conclusions. We have already seen that between thirty and fifty is the epoch of maximum dramatic production in France: it is also the epoch that produces the most numerous and obstinate cases of mental alienation. The intellect commences its developement at twenty-five, the time when the physical developement is completed. At this period also commences the maximum tendency to crime.” On this subject, the author adds, in a note, “I am of the opinion, that the causes which tend to produce mental

alienation, influence also the number of crimes, especially those against the person. There is not, however, any direct numerical relation between the two quantities, because crimes are committed through other influences than that of insanity.”

In page 130, vol. 2, mention is made of a work on insanity by Mons. Fabret, from which the following conclusions are drawn:—

The number of female lunatics is about one-third more than that of males. The month of July is the period of most frequent attack for the females, while it is the third only in the scale, as applicable to man. There is about a fourth more bachelors than married men insane. Males are chiefly attacked between thirty and thirty-nine, women between forty and forty-nine. Melancholy predominates among women, a tendency towards suicide among men.

The second chapter treats on the developement of moral qualities, a subject hitherto nearly untouched. To estimate this element in any of its particulars (as, for instance, in what relates to prudence), recourse must be had to an appreciation of the overt acts which each quality originates. To proceed with the inquiry, the greatest number of instances possible should be collected, due attention being paid to the identity of position of the several parties. In the choice of these materials, their classification and discussion, the greatest sagacity and rectitude of intention is necessary. The first observers would probably fall into many errors; but, even errors would not be useless to the future inquirers, provided candour and impartiality presided over the investigation: but the conducting such researches under the influence of preconceived ideas, would be a fatal impediment to the progress of the science. If accurate information could be obtained of the statistics of savings banks, insurance-offices of all sorts, and all other institutions which have foresight for their object, and if the documents contained the ages, sexes, and professions, &c., of the individuals who availed themselves of the institutions, enough would be known to make an approximate solution of the question. In aid of these sources of information might be applied (under the necessary precautions) whatever could be gathered concerning the number and value of objects deposited with pawnbrokers, which would afford a sort of measure for the improvidence, as well of the distress, of the people. The number of bankruptcies, tippling-house, gaming-tables, &c., might be brought also to throw light on the subject. The author quotes the table constructed by Mr. Babbage of drunkards brought before the police of London in 1832; from this table (as far as it can be relied upon), we may set down the female tipplers of London to the males as being two to three, a dreadful conclusion against the morality of the lower classes of women.⁶

In directing inquiry to the industry and productive faculties of a nation, any

⁶“It requires to have been long an inhabitant of London,” says M. Quetelet, “and to be well acquainted with its peculiarities, to be able to draw the proper conclusions from such numbers as these.” The remark is of great importance. In the case before us, the numbers quoted are those of the two sexes respectively *taken up* for drunkenness by the police. These embrace only the more profligate class, who are abroad in the streets at undue hours; and of these, the number of men and women are probably in somewhere about the ratio above given. Without the knowledge of this fact, a very false inference would be drawn from the cipher.

defect in positive information might be supplied from a consideration of the value of its revenues, the nature of the taxes, the imports and exports, the price of land, and the rate of wages; and, above all, the state of the population. From these sources it appears, that France, as compared with England, is less peopled, has fewer inhabitants of cities, and fewer manufacturers. The revenue of England is double that of France, and its exports, population for population, three to one. In Europe, Russia excepted (and Ireland also), the numbers employed in agriculture are per square mile nearly equal throughout; the surplus production of each nation must therefore indicate the state of its manufacturing industry, or nearly so.

The statistics of charitable institutions form a branch of this inquiry, but the author was compelled to pass it over, for want of the necessary documents.

Under the head of Moral Development, Mons. Quetelet places his observations on suicides and duels. There is to be remarked (says our author, commenting upon the tables he produces, relative to these acts), a fearful agreement in the results of different years; and this uniformity extends to all crimes in general. He notices, however, in a note, the tendency of imitation to produce temporary changes in the modes of suicide. The same observation might likewise be applied to all actions that are attended with extraordinary circumstances; of which the offence of Burking affords a remarkable instance.

As might be expected from what has been said of mental alienation, the summer season is marked by an increase in suicides. According to Dr. Casper, the suicides in cities are to those in the country, *cæteris paribus*, as 14 to 4. In Berlin, the male suicides were to the females as 5 to 1. According to the 'Recherches Statistiques de Paris,' the ratio is nearly as 2 to 1. These deviations from a common average, are too wide to allow of any general deduction, except that of referring them to a difference in the moral condition of females in the different cities.

From M. Faïret's work the author deduces, that of male suicides (we presume in Paris), the largest number are bachelors; of female suicides, the larger number are married, which may be justly explained by the greater number of evils which sexual errors bring with them in society on the female. Of suicides under fifteen years of age, the females double the number of males. With reference to the means of destruction, the males prefer the pistol and the knife; women prefer poison, voluntary falls from elevated places, and suffocation by charcoal.

Chapter III. treats of the general *nisus* to crime. In this chapter Mons. Quetelet goes over a great deal of ground which we have already discussed with our readers in our review of Mons. Guerry's 'Essai sur la Statistique Morale de la France.' It may however be necessary to state, that Mons. Quetelet's first work on the Statistics of Crime appeared before the publication of this Essay. Supposing men to be placed in equal circumstances, the greater or less possibility of their committing crime constitutes this *nisus*. Mons. Quetelet's object is to determine the influence of the seasons, of climate, sex, and age, upon this datum. In a note (p. 164) he quotes an article on the statistics of crime, by M. Adolphe de Candolle, of Geneva, which states the disposition to crime to be composed of the relative morality of the individual—the temptation

to which he is exposed—and the facility attendant on the commission of the specific offence: of these, he says, the first belongs to the individual, and the other two to externals. The distinction may have its value in certain points of view; but even individual morality is derived in part from society, as well through precept as through example. All the world is aware of the sudden and appalling degradation which follows the incarceration of young offenders among the veterans in crime.

In judging the general disposition to crime from the returns of criminal tribunals, it is scarcely necessary to state, that the constancy of the ratio between known and undiscovered offences, must be taken for granted. This will, of course, vary in different states of society, and under different judicial arrangements. It must differ also with respect to different crimes; for all do not provoke an equal vigilance on the part of society to repress them. With respect to the same country, and civilized condition, however, these elements may be taken as constant, and therefore may be disregarded: of the safety of overlooking them, the constancy of the results hitherto obtained is an additional guarantee.

In France, it appears from the *Comptes généraux de l'administration de la Justice*, that during four years preceding 1830, there was an average of one accusation in 4,463 inhabitants. Of 100 accused, there were 61 convictions; and, as these averages have, on repeated observation, been found to be remarkably constant, it becomes highly probable that they very nearly represent the true state of criminality of the country, and that safe indications may be drawn from them, as to what may be expected in the future.

This possibility (Mons. Quetelet feelingly remarks) of assigning beforehand the number of accused and condemned, which any community may expect, is a matter of very serious reflection, since it involves the fate of thousands of individuals, who are impelled, in a manner that may be called irresistible, upon the tribunals and scaffolds that await them.

The reflection applies alike to individuals and to legislative bodies: over both, the horrible notion of public vengeance still holds too powerful a sway; and the sentiment which inspires it is the more carefully to be guarded against, because it is instinctive,—a part of those brute instincts, which require all the instincts of reason to keep in check: the wise alone are truly merciful.

Subsequently to the author's writing the chapter under consideration, two more volumes of the 'Comptes Rendus' of the French tribunals have appeared, including the years 1830,1. After giving, in a note, the general result of this additional information, Mons. Quetelet remarks upon it, that the revolution has made but a trifling difference in the numbers of accused. The number of acquitted is a little increased; and the same alteration has occurred likewise in Belgium, where institutions have been equally popularized.

In comparing the criminal returns of France and Belgium, a circumstance is mentioned worthy of observation. In the trials for offences against property in Belgium, the acquittals are to the condemnations as 16 to 84, or 1 to 5 nearly; while in France they were as 39 to 61, or nearly 3 to 5. In France, the trials are before a jury: in Belgium, before judges. The probability, therefore, is that

the want of skill of jurymen⁷ in sifting evidence may explain a part of this great difference: but it is probable that a superior caution in admitting accusations on slight probabilities, may also go for something.

In examining the question of the influence of professions, education, &c., on crime, a relative table of crimes against person and property in France for the years 1828–9 is quoted, distinguishing four degrees of education from zero to the highest. The result shows, that the educated commit more crimes of violence, in proportion to their offences against property, than the illiterate: the difference being respectively $\frac{1}{2.6}$ and $\frac{1}{3.2}$. It does not, however, appear, whether this should be taken as an inference against education, or, what is infinitely more probable, as a consequence of the few offences against property committed by the upper and middle classes of society. Want of space precludes our following the author through the very interesting details with which he pursues this inquiry.

The discussions into which M. Quetelet enters respecting the influence of race, afford little or nothing for extract. Of all the different causes which operate on social life, that is, perhaps, the one most difficult to trace, with any practical effect; the populations of modern Europe being so mixed and amalgamated, that little of positive can be concluded concerning them.

On the influence of the seasons on crime (in France), M. Quetelet gives the following *résumé*—

The epoch of the maximum of crimes against persons coincides nearly with that of the minimum of crimes against property—namely, during the summer: in winter, the order is precisely reversed. In January, the offences against property are nearly four times as numerous as those against the person; in June, they are only as 2 to 3. This may be explained by the consideration that, in winter, distress and destitution are the most severely felt; whereas, in summer, the passions are in a state of excessive exaltation.

As to the influence of sex, it appears that, in France, there are twenty-six accusations against females in every hundred for offences against property; in those against the person, the proportion is $\frac{16}{100}$: and it is further to be noted, that this ratio of 16 to 26 is that which subsists between the physical forces of the two sexes. The particular inferences derivable from such general statements must, however, be subjected to a nice scrutiny in weighing all the details of difference in position, temptation, and defence, which surround the two sexes. The same weakness and social dependence of the female on the male, and the same circumvallation of forms and etiquettes, which have a tendency to preserve a woman in the bosom of society from the commission of crimes, tell against her in causing an exaggeration of criminality, when once she has been driven to break through its lines, and becomes an outcast.

Of all the causes which influence the nusus to crime, age is the most consider-

⁷The operations of the jury in France are not yet conducted with all that *tact*, which a long experience has given to the jurymen of England. It is probable, likewise, that the forced unanimity of English juries tends to produce a salutary rigour, where the punishments are not disproportioned to the offence. We, ourselves, at least, are inclined to believe, that there exists among Frenchmen a sickly sentimentality on the subject of estimating evidence against the accused, which is not manifested in the verdicts of Englishment.

able. The physical forces—the passions—the reason of man (the three elements which are most closely connected with the age of the subject), taken as data, will alone nearly suffice to determine at every epoch of life, what may be expected relative to the criminality of the population attaining to it. The entrance into the career of criminality is naturally about the epoch at which the youth is compelled to assume self-dependence. The corruptions, however, of the capital have advanced that epoch, for the children of the extreme poor and the abandoned: we therefore suspect that tables, modelled upon French society, would not coincide with those of London, and of the manufacturing districts of England.

The proposition, so generally received, that poverty begets crime, Mons. Quetelet observes, requires modification. The poorest provinces are often the most moral. In confirmation of this, we can state, that dishonesty is a rare crime among the starving population of the south of Ireland. This, in part, arises from the absence of the matter of criminality; and, in part, from the means of secreting and exchanging the stolen property. A certain degree of movement in society is necessary to the prevalence of certain offences.

In the fourth book, Mons. Quetelet enters upon his rsum of the average man—that is, on the philosophy of the facts contained in the three preceding books. The subject is not, he observes, a matter of mere idle speculation, since this ideal abstraction is the centre of gravity, on which the movement of society turns.

In reference to the arts and literature, the consideration of the average man of the particular epochs and nations which afford the subjects of study, is a matter of known importance. How false are those productions in which the author has overlooked the colouring and costume of the times, or the common attributes which distinguish one nation from another; and how necessary, on the other hand, is it to rise above these considerations, and to know what remains to average humanity, when all such local and temporary attributes are abstracted, in order that the protagonist, (placed under what circumstances he may,) shall still exhibit the feelings and passions of a man. Of the necessity of referring to the average man in matters of art, we may refer to an article ‘On Certainty in Taste,’ in the *Athenæum* (No. 366), in which our correspondent has adopted some of the opinions of the author now before us. In the development of art and literature, mankind have hitherto been content with such vague generalities, as are included in Horace’s Art of Poetry; and even these have not always been made the most of. The love-sick heroes of the French tragedy are at total variance with the average man of Greece and Rome, which they are meant to represent. We cordially agree with M. Quetelet, that, in the interest of art, there can be no harm in giving a greater precision to our ideas on this subject; but we are still inclined to think, that precision of knowledge is less a *desideratum* in the present state of the arts, than discrimination in applying what is known. The arts deal principally in generalities; and we doubt whether statistics will add materially to the resources of the Wilkies and the Walter Scotts.

The value of statistical tables for determining the average man in relation to the natural and medical sciences, is self-evident. All medical theories repose

upon the supposition of such an abstraction; as all medical practice turns on the observation and calculation of the several divergencies from it, peculiar to each individual patient. Hitherto the determination of the several attributes in health and in disease, of this ideal being, has been too vague and general, and medical theory consequently has been, and is, subject to endless and vexatious uncertainty and variation.

Considering the average man in relation to the moral and intellectual attributes, Mons. Quetelet examines many points concerning the difference between the average man of a peculiar type and country, and the average type of humanity, with a view to determining in what particulars man is a stationary, and in what a perfectible, being. This section of the work is full of curious and ingenious remark, and it will well repay the perusal. In the following opinion, however, we cannot exactly agree. "If," it is observed, "an individual at any given epoch of society possessed all the qualities of the average man, he would represent all that is great, good, or beautiful." We question whether, in such a being, the springs of action would not be so accurately balanced as to neutralize each other. The machine, we imagine, would want momentum, and its symmetry would want character. Our conception of the great, good, and beautiful, we rather think, contains, in a certain degree, the idea of excess; so that it is no play upon words to say, that the "homme moyen" would be a mediocre personage. "but," continues our author, "this perfect identity cannot exist for individuals; they only resemble the average man in a few points;" and the reason, as it appears to us, is, that certain attributes in their perfection are physical and moral incompatibles. Is not a certain degree of physical insensibility necessary to the *beau idéal* of courage?—a certain indifference to externals necessary to the power of profound generalization?—a certain defect in the power of considering things in their unity, necessary in the power of noting and imitating individual details in the arts, &c.? The idea of perfection, then, is not, we think, to be sought in an uniformity of individuals, but in their endless variety, and in the balancing of their several attributes in social co-operation. In this sense, there is some truth in the remark of Mons. Cousin, quoted by our author, where he says, or seems to say, "a great man is the result of an harmony between a particular and a general nature."

Mons. Quetelet next shortly examines the average man in reference to politics, and concludes his work by a chapter on the ulterior progress to be looked for, in this branch of science, and a review of the means requisite for giving perfection to an inquiry, which is, at present, only in its infancy. It is obvious, from the perusal of M. Quetelet's work, that in giving the scanty and imperfect observations which hitherto have been made on the statistics of our moral and intellectual nature, his great object is to solicit public attention to a neglected subject; and to awaken curiosity to the mass of latent knowledge that is within the reach of exploitation. The zeal with which this new science has been taken up, promises a rapid accumulation of facts; but the progress of the science will mainly depend upon the critical sagacity which shall be brought to their appreciation. If speculative philosophy must gain by the use of statistical tables, the tables will, on the other hand, require all the lights of philosophy to interpret.

The formulation, therefore, of a sound critical canon is a primary desideratum; and it is to a writer of Quetelet's elevated intellectual character, that the public will naturally look for such a work. To a certain extent, the volumes before us may serve as a guide to the subject; but the subject is scarcely more than sketched; and the author cannot better follow up his publication than by a formal discussion of this branch of his subject.

We have bestowed more space upon M. Quetelet's highly-important "Essay" than comports perhaps with the general interests of our journal; yet, at every step of our very imperfect analysis, we have been cribbed and confined by the quality of the matter, and compelled to leave untouched much that is valuable and curious. To the zeal and perseverance of the author, the science is deeply indebted for much of the progress it has made, and for much of the importance it has recently acquired in the eyes of philosophical Europe. We consider the appearance of these volumes as forming an epoch in the literary history of civilization.