the *Exact Sciences*, in addition to Classics and General Literature.

CLAUSE XXVIII. The words "and convenient", after "as far as is practicable", are expunged.

CLAUSE XLII now stands as under:—

"It shall be lawful for the Medical Council to make regulations for dispensing with such provisions of this Act as to them shall seem fit, in favour of persons now practising medicine or surgery in any part of Her Majesty's dominions other than Great Britain and Ireland by virtue of any degree in medicine from any English, Irish, or Scotch university, or on any of the qualifications enumerated in Schedule (c); and also in favour of any surgeons or assistant-surgeons in the army, navy, or militia; and also in favour of medical students who shall have commenced their professional studies before the passing of this Act."

ORIGINAL COMMUNICATIONS.

LECTURES ON INSANITY, DELIVERED AT THE BRISTOL MEDICAL SCHOOL DURING THE SUMMER SESSION OF 1855.

By J. G. DAVEY, M.D.

LECTURE II.

CAUSES OF INSANITY. HEREDITARY PREDISPOSITION: ILLUSTRATIVE CASES. TRANSMISSION OF ACCIDENTAL OR ACQUIRED CONDITIONS. SOCIAL CONDITIONS. WEALTH AND POVERTY. PERIOD OF PUBERTY. IMPROVIDENT MARRIAGES. TEMPERAMENTS.

I REMEMBER well my first visit to the wards of a lunatic asylum: my introduction to the interior of Hanwell, to the presence of so large a body of insane persons, was accompanied with feelings not easily forgotten. The "tyranny of fancy's reign" was here exhibited on a very large scale; a scale so large indeed that it took some little time ere it could be altogether realised. The assemblage of many hundreds of insane under one roof reveals a state of things calculated to arrest the attention of not only the man of science, but of the philanthropist. Is there no relief, no remedy, for this mass of suffering humanity? In what manner have the laws of health been so infringed that numbers such as these have fallen victims? These are the questions which will not unlikely intrude themselves on you, on the first occasion, at least, that you visit one of the county asylums. Within any one of these establishments you will witness almost every conceivable distortion of the human mind; herein the divinest part of man, his most perfect and most significant prerogative, is seen deformed and wasted. Faculties and feelings, which may have been, in times now gone, well and nobly employed, and kindly and beneficially exercised, and both devoted to the interests of a contented and happy household, of a fond wife and dependent children, are seen powerless, useless, and, it may be, for ever gone. The husband and the father are known no more; but, in their stead, the poor maniac, the incurable lunatic. "The human mind," writes the late Dr. Badeley, "is such a heterogeneous mass of ideas and propensities, that when reason has lost her control, they break forth in various forms and degrees, rendering thereby a lunatic asylum a chaos of ungoverned passions, hallucinations, and delusions. Thus, under one roof we find one man singing, another reciting, another standing apparently absorbed in thought, another melancholy and mute, another walking hurriedly, and muttering incoherently to himself, another full of tricks and mischief,—all and each of them regardless and unconscious of the absurdity of their deportment, and holding no intercourse with their companions, but each playing a part in the wakeful dream of his own disordered imagination. Yon are a group of wakeful somnambulists; some will answer you if spoken to, others will remain obstinately silent; others will give not only a rational, but a shrewd reply. Regardless of censure or of ridicule, they have no concealment, and, therefore, reveal their hallucinations, and are kings, or deities, or statesmen, or poets, or anything else that may be prompted by their visionary impressions. Ever and anon their propensities break forth in exaggerated disorder; the depravity of their feelings being variously manifested; the intellectual faculties are comparatively little affected. A prey to the suddenness of their impulses, they would, under certain circumstances, attempt the destruction of either their children or their nearest relations, and this under the influence of the best possible, though delusive, intentions."

It will be my object in this lecture to consider from whence springs this "chaos of ungoverned passions", etc., this "group of wakeful sonnambulists", or, in other words, the origin of insanity; to trace the principal source or sources of this direful malady, both those congenital (hereditary), and those acquired subsequently to birth. The relation of these sources of mental disorder to each other, and their association, in common, with the organic peculiarities of individual cases, by which I mean the temperament and the cerebral organisation, determine, as it will be my endeavour to prove to you, the symptoms of disease in each patient: they determine the form of insanity—whether mania, monomania, dementia, or moral insanity, and so on.

It is not sufficient for our purpose that we confine our attention to the origin of insanity, as restricted to that period immediately antecedent to the outbreak of the disease; to do justice to the subject, we must consider the organic conditions of the parents when the existence of the child is first communicated. Among the many evils to which flesh is heir, several of the most painful and fearful visitations are evidently of an hereditary nature. Insanity is one of the most striking evidences of the fact. At what period any disease may have assumed a hereditary character, no one can presume to say; but is evident that through all ages children have been observed to inherit the diseases of their parents. By hereditary disease is meant a disease communicated by parents to their children before their birth, and by them transmitted to their offspring. It appears, moreover, that these disorders are communicated to a child, *ab initio*, by the father or mother during the progress of fœtal development. Many diseases, nevertheless, under which the parents have laboured, not only appear in a different form in their children, but at various periods of their life; oftentimes not until the age of puberty. Hereditary transmissions will also assume various characters; and Portal has observed, that in the same family one child will be a lunatic, and another an epileptic. Of the hereditary nature of insanity, no doubt can be entertained. "It attaches", says Dr. Millengen, "to entire families, to races, to names which cannot be traced to the same origin. I know three families of the same name, in which are found as many as seventeen lunatics; and there are patronymics which cannot be mentioned without an association with mental derangement. It is painful to reflect, that even moral depravity is observed as the characteristic of a race; thus we see an entire family given to lying, or to thieving, or to swindling, although we might imagine that a conviction of the heinous nature of an offence daily perpetrated by their nearest and dearest relatives would excite a feeling of horror or of disgust, that would deter any member of the vitiated circle from the commission of a similar breach of morality and of the law."

Dr. Mason Good observes, that "stupidity, like wit, is propagable; and hence we frequently see it run from one generation to another; and not unfrequently it forms a distinctive mark in the mental character of districts or nations; in many cases, indeed, where they border closely on each other." The celebrated Haller records the following very interesting fact, viz: "Two ladies of high rank got husbands on account of their wealth, although they were

nearly idiots; and from them this mental defect has extended for a century into several families, so that some of all their descendants still continue imbecile in the fourth and even in the fifth generation." Travellers record that "the degeneracy and even idiotcy of some of the noble and royal families of Spain and Portugal, from marrying nieces and other near relations, is well known; and we are assured by Mr. G. Combe, that 'in all these cases the brains may be observed to be defective.'"

Those gentlemen who have given much attention to the subject of medical jurisprudence may have come across the case of one Thomas Bowler, the subject of maniacal disorder consequent on epilepsy. This poor man was arraigned on the charge of murder before Sir Simon Le Blanc; and although a commission of lunacy was produced, bearing a date anterior to that whereon the foul deed was perpetrated, and an inquisition taken upon it whereby the prisoner was found insane, yet was he lawfully, but unrighteously, executed. This circumstance occurred in 1812; and during my connexion with the Hanwell asylum (from 1840 to 1844), I discovered, by mere accident, that the grandson of the same Thomas Bowler was then a patient in the establishment. Moreover, on inquiry, I learnt that the daughter of the man so barbarously sacrificed by the laws of his country, died of "puerperal insanity", having given birth to two sons, both of whom became mad. The elder of the two committed suicide some twenty years ago, the other has since died, I believe, at the Hanwell asylum. The family of the Bowlers have lived for a very long period not very far from Hanwell; I used to see much of them at one time; that they retained a strong hereditary predisposition to insanity, there can be no doubt.

The hereditary predisposition to insanity is consequent on the transmission from the parent to the offspring of a peculiar temperament, just as it is in other hereditary disorders, as consumption, gout, and scrofula. In all such cases, it is not so much the disease which is propagated as it is organs of such imperfect structure, that they are unable to perform their functions properly, and so weak as to be easily put into a morbid condition by causes which sound organs are able to resist. Hereditary mental disease (insanity) not unfrequently assumes a peculiar feature. The disorder affecting the brain, instead of being general, and involving the whole psychical nature of the patient, is confined apparently to a part of the cerebral structure, and affects just one or two of the primitive faculties or passions; thus the propensity to commit suicide, or to steal, or to burn, or to lie, is, now and then, seen to be of a decidedly hereditary character, and is, therefore, perpetuated from one generation to another.

At page 14 of the late Dr. Millengen's work *On the Passions*, we read thus: "Dr. Gall relates the case of a Mr. Gauthier, owner of several warehouses at Paris, who left to his seven children a property of two millions of francs. They all resided in Paris and its environs, where they lived upon their property, which some of them had considerably increased by fortunate speculation. Not one of them was visited by any material disaster, and all enjoyed perfect health. They were all highly esteemed by their friends and neighbours, yet all of them laboured under an inclination to commit suicide, and to which they yielded in the course of thirty or forty years; some hanged, some drowned, and others shot themselves." Again. "A person committed suicide at Paris; his brother, who was present at the time, exclaimed, 'What a misfortune! my father and my uncle have both destroyed themselves; and I myself, during my journey here, was more than twenty times scarcely able to withstand the temptation to fling myself in the river.'" Dr. Rush mentions the case of two young American officers, who distinguished themselves in the revolutionary wars, and who were twins, and so much like each other, that few could distinguish them. Both were of a cheerful disposition, happy in their family, their connexions, and fortunes. Both committed suicide about the same period, when they were in different parts of the country. They had been dejected for some days before. The mother of these young men was insane, and two of their sisters were for some years harassed by temptations to destroy themselves.

The succeeding remarks, headed "A BURGLARIOUS FAMILY", were contained in the *Times* newspaper about two years since. They prove, clearly enough, that "moral depravities" (*i. e.*, crime) are not less hereditary than are bodily deformities and defects, of whatever kind; they prove, also, to my mind, the fact that the indications of moral insanity, as described by the late Dr. Prichard, are not yet so generally recognised as they should be.

"Three of the daughters of the notorious burglar Maggs, a native of Horsingham, Wilts, the details of whose capture, committal for trial, and the discovery in his premises, when searched, of a whole bagful of skeleton keys and other housebreaking implements, have already appeared in the *Times*, have been apprehended by the police, charged with attempting to break into a farmhouse at Woodlands, near Frome. The house is not far from the scene of the Frome murder, on suspicion of perpetrating which, Maggs and two of his associates were tried at the last Somersetshire assizes, but acquitted. It appears that while the occupants of the farm were at the market, these girls went into the garden, lifted up the sash of the window, and, having propped it up, the eldest was proceeding to assist her sister to get in, when they were discovered. On being taken before the magistrate, and the case gone into, the youngest was discharged; the eldest was committed to Shepton Mallet House of Correction for two months, and her sister for two months, with hard labour attached. Their ages are respectively six, nine, and fourteen years. The family is a most incorrigible one. Maggs has nine or ten children, all of whom are, it is stated, as expert at poaching and thieving as their notorious father. He himself is partly the victim of a bad example, his own father having early initiated him into the career of vice and infamy which he has pursued for so many years. His wife was formerly convicted of theft, and suffered imprisonment, and both a son and son-in-law have been transported, the latter for a burglary at Frome vicarage. The gang of which he was the head, was for a long period the terror of Frome and the surrounding district, but it is hoped that they are now effectually dispersed; and as to Maggs and his immediate associates, from the amount of evidence collected against them on various charges, there can be no doubt of their ultimate fate."

The persistence of the criminal propensity for three successive generations in the Maggs family, and that under the peculiar circumstances mentioned, would seem to justify one in considering the grandfather, the father and mother, and the nine or ten children, as so many victims of a depraved cerebral organism, *i. e.*, a defective brain, an organ incompetent to the due discharge of the mental powers, but compatible only with the exercise of the lower—the animal feelings and propensities.

The following narrative is from the pen of Dr. Steinau; it is found in his *Pathological and Philosophical Essay on Hereditary Diseases*. "When I was a boy, there lived in my native town an old man, who was such an inveterate thief, that he went in the whole place by that name; people speaking of him used no other appellation but that of the thief, and everybody knew then who was meant. Children and common people were accustomed to call him by that name, even in his presence, as if they knew not his other name; and he bore it, to a certain degree, with much good-natured forbearance. It was even customary for the tradesmen and dealers, who frequented the annual fair in the place, to enter into a formal treaty with him; that is, they gave him a trifling sum of money, for which he engaged not only not to touch their property himself, but even to guard it against other thieves. A son of this man afterwards lived in B—— during my residence there. He was respectably married, and carried on a profitable trade, which supported him handsomely. Still he could not help committing many robberies, quite without necessity, and merely from an irresistible inclination. He was several

times arrested and punished; the consequence was, that he lost his credit and reputation, by which he was at last actually ruined. He died while still a young man, in the House of Correction, where he had been confined for his last robbery." Of the son of this latter person, we are told that "in his earliest youth, and before he was able to distinguish between good and evil, the disposition to stealing, and the ingenuity of the expert thief, began already to develope themselves in him. When about three years old, he stole all kinds of eatables within his reach, although he had always plenty to eat, and only needed to ask for whatever he wanted. He, therefore, was unable to eat all that he had taken; nevertheless, he took it, and distributed it among his playfellows. When playing with them, some of their playthings frequently disappeared in a minute, and he contrived to conceal them for days, and often for weeks, with a slyness and sagacity remarkable for his age. When about five years old, he began to steal copper coins; at the age of six years, he began to know something of the value of money, and he looked out for silver pieces; and in his eighth year, he only contented himself with larger coins, and proved to be on public promenades an expert pickpocket. He was early apprenticed to learn a trade, but his master, being continually robbed by him, soon dismissed him. This was the case with several other tradesmen, till at last, in his fourteenth year, he was committed to the House of Correction."

The hereditary nature of insanity acquires strong and additional confirmation from the fact that certain accidental or acquired conditions of either parent have been transmitted to the offspring. Thus it is reported by a surgeon of Douglas, Isle of Man, that "a man's first child was of sound mind; afterwards he had a fall from his horse, by which his head was much injured. His next two children proved to be both idiots. After this he was trepanned, and had other children, and they turned out to be of sound mind." Mr. G. Combe, in his *Constitution of Man*, writes thus: "A friend told me that in his youth he removed to a county in which the gentlemen were much addicted to hard drinking, and that he, too frequently took part in their revels. Several of his sons, born at this time, although subsequently educated in a very different moral atmosphere, turned out strongly addicted to inebriety; whereas the children born after he had removed to a large town and formed more correct habits, were not the victims of this propensity. Another individual, of superior talents, described to me the wild and mischievous revelry in which he indulged at the time of his marriage, and congratulated himself on his subsequent domestication and moral improvement. His eldest son, born in his riotous days, notwithstanding a strictly moral education, turned out a personification of his father's actual condition at that time; and his younger children were more moral in proportion as they were removed from the period of vicious frolics. The elder members of the family of the former individual doubtless inherited an incipient *dipsomania*, whilst the eldest son of the latter was the subject of a congenital perversion of the moral feelings and the passions."

The idea of the transmission of *temporary* and abnormal mental qualities in the parents is supported by numerous facts; and so is that of sudden and strong impressions of an unhealthy character occurring to the mother during the early periods of pregnancy. It was remarked by the celebrated Esquirol "that the children whose existence dated from the horrors of the first French revolution turned out to be weak, nervous, and irritable in mind, extremely susceptible of all ordinary impressions, and liable to be thrown by the least extraordinary excitement into absolute insanity. It is on record that a lady, during pregnancy, received intelligence that the crew of the ship, on board of which was her son, had mutinied; that when the ship arrived in the West Indies, some of the mutineers, and also her son, had been put in irons; and that they were all to be sent home for trial. This intelligence acted so strongly upon her, that she suffered a temporary alienation of judgment. The report turned out to be erroneous, but this did not avert the consequences of the agitated state of the mother's feelings upon the daughter she afterwards gave birth to. That daughter is now a woman, but she is and will continue to be a being of impulses, incapable of reflection, and in other respects greatly inferior to her sisters."

For the accuracy of the following case, illustrative of the very palpable effects on the offspring of a temporary and abnormal impression, I will vouch. "W. B., a shoemaker, has a son who is in a state of idiotcy. He is simple and harmless, but never could do anything for himself. His father said that his wife was in sound mind; that he has three other children all healthy; and that the only account he could ever give of the condition of this son was, that he kept a public-house, and some months before the birth of this boy, an imbecile lad came round with a brewer's drayman, and helped him to lift the casks off the cart; that that idiot made a strong impression on his wife; that she complained that she could not get his appearance removed from her mind, and that she kept out of the way when he came to the house afterwards; and that his son was weak in body from birth, and silly in mind, and had the slouched and slovenly appearance of the idiot." (Combe, *Constitution of Man.*)

Doubtless there are many persons in the world who, though partaking of a strong hereditary tendency to insanity, manage to escape lunacy. The circumstances which constitute their personal history, or, in other words, their antecedents are, happily for such individuals, favourable to the maintenance of a sound mind and a vigorous health. But this is the exception to a general rule; far different is it with the majority of these ill-fated mortals—with perhaps nine-tenths of them. It matters not, perhaps, so much as it would appear to do, what the social position or rank of the party may be thus ushered into existence with the very seeds of insanity engrafted on his or her organism, for it very commonly happens that the poverty of the lower classes, so called, is counterbalanced by the excesses of the affluent and higher classes. Want and wealth are extremes which may be approximated by many degrees and in various ways. The first named is certainly a fertile cause of disease of every kind, including insanity; but the second originates so many artificial wants, and draws so largely on the vanities and caprices of our common nature, that in spite of large possessions, want is still seen in operation, though in another dress and under other circumstances. When wealth begets excess, and excess begets want, then is disease not far in the background; and then is lost the hygienic distinction, so to speak, between the two classes of society—between the poor and the rich man. All those who inherit the organic tendency to mental disorder, of whatever rank of life they may be, have the strongest claims on our sympathy; for whatever the inequalities of fortune may be, each and every station in life involves so much ignorance of, and inattention to, the laws of health, that it would be a wonder indeed if disease were always averted or kept in abeyance. To medical men, the privations and consequent physical wretchedness of the poorer classes are too well known; and, knowing them, we are not surprised at either the prevalence of disease, or at the higher rate of mortality which obtain among them. Such are especially subject to insanity. The overworked artisan of our large towns, and not less the ill-paid agricultural labourer, are, as a general rule, the offspring of parents themselves born surrounded with every kind of physical wretchedness, and what is more, nurtured in want and trained to habits of selfishness and vice. Both the artisan and labourer, therefore, experience a double disadvantage; they inherit the organic defects of their respective progenitors, and these become aggravated in themselves by causes over which they can have little control, viz., defective ventilation, insufficient and improper food, exposure to cold or changes of temperature, want of due clothing, the absence of good precept and of wholesome example. The nervous organism of such persons is necessarily much and seriously deteriorated; and, as a consequence, disease, and particularly insanity, may be expected to prevail among them to a great extent; that

such is really the case, the increased and increasing number of county (pauper) asylums throughout the kingdom will convince you. To medical men also the excesses of the wealthy or higher classes are not unknown: their intermarriages, their luxurious mode of life, their fashionable foibles, their prevailing follies, their pleasure seeking, their excitement hunting, their vanities, their ambitions, their resistless self-love, their hopes, fears, and disappointments, mixed and imbued as all these are with their daily routine, prove hardly less destructive of health, mental and corporeal, than the wants and privations of the poor and helpless. Insanity is greatly on the increase among the wealthy population of this country.

Now I think it cannot be denied that among those persons representing either of the unnatural extremes just referred to; and whilst partaking of a strong hereditary tendency to diseased action, the occurrence of insanity may be looked on as almost a sequence to want or wealth, as these have been described. The antecedents of both parties are most unfavourable to either a sound mind or a sound body, and they are therefore to be regarded as ever on the very confines of organic disorder, if this be not already indicated by the ordinary external signs or symptoms. In considering the various sources (*i. e.* origin) of mental disorder, we have hitherto dwelt too exclusively on those proximate; the remote causes of insanity, though of the first consideration and importance, are not sufficiently considered. It may seem strange to some to speak of the social position or domestic relations of a people as a cause of so direful a malady as that which now engages our attention; but an exact acquaintance with the constitution of man in relation to external objects, will satisfy you that the subject is one which cannot be overlooked by the medical philosopher. The essential and first cause of insanity, as of scrofula or consumption, may commonly be traced to the attendant circumstances of poverty, the persistence of which is attended with a certain yet undefined disintegration of the nervous tissue, which is, in the first place, most probably made manifest in the ganglionic nerve structure, and afterwards in the cerebro-spinal organism. The infringement, however, of the natural or organic laws is not limited to the lowly dwelling of the poor; the fact obtains, perhaps not equally, but to a very great extent in the substantial and costly home of the rich man. That neither one is rendered compatible with the requirements of health, or is found harmonising with what the late Mr. Mayo called the "philosophy of living", or is calculated to develop the *mens sana in corpore sano*, may be fairly inferred from what each of us may have witnessed in so far as the "inequalities of fortune"* are concerned.

Poverty is, in itself, not unfrequently a mere psychical condition of being. Poverty is, I doubt not, more commonly than is imagined, the external sign of an internal and mental defect on the part of the sufferer. The long operation of depressing agents on many of those in the lower walks of life robs them of the power of exertion; their mental and moral natures are bound down by the weight of misfortune; their nervous energies are broken; they thus realise a species of mental abstraction akin to imbecility, which is altogether foreign to habits of exertion, and alien to industrious pursuits; such a state of being, I apprehend, occurring to the once healthy parent, develops in his offspring the hereditary tendency to insanity.

A reviewer, in the last number of the *Psychological Journal*, writes thus: "It is in the profound study of the remote, as contradistinguished from the immediate causes of insanity, that we must look for the most accurate and scientific extension of our knowledge of mental pathology. It must be obvious to all those who have devoted their minds to this subject, that the path hitherto pursued in the accumulation of what are presumed to be etiological data, is one pregnant with error. In the etiological tables systematically kept in most of the continental and British asylums, the proximate exciting cause is chiefly kept in view. Poverty, reverses, mental concussions, physical lesions, and other circumstances apparently connected closely in point of time with the outbreak of open insanity, are set down as the causative agencies." The "antecedent idiosyncrasy" does not meet with the attention it deserves. The influence of hereditary tendency has not, indeed, been overlooked; but we doubt whether it has been rightly appreciated: and we do not doubt that much, very much, still remains to be done in detecting the genesis of mental aberration in persons who may be supposed to be free from hereditary stamp. The primary influences which create the insane actuality are often lost, obscured by lapse of time, unobserved, not remembered; and the mind of the physician, hankering as the human mind will for the definite, fixes upon a later period in the development of alienation, and seldom fails to associate some marked mental aberration and tangible exciting circumstance, and to behold in them a relation of cause and effect. But how much of insanity might there not be, and how many mind-impairing circumstances in operation, *prior* to the date at which he took up the psychological history. "It is to the minute and philosophical analysis of the insane constitution, and of all the elemental causes which assist in the genesis of insanity," that the pathologists must look for an improved etiology of the disease.

In so far as the middle classes are concerned, although they may and do escape the principal of the causes of mental alienation which obtain among both the poorer classes and the wealthy, yet do we find that even they—on the one side removed from the grasp of pauperism, and on the other without the pale of those artificial and fretful accompaniments of a pseudo-civilisation—are much afflicted with insanity. Probably the disorder is not so commonly of an hereditary nature in them: it would seem, as a very general rule, to originate in the hard struggles of life to which the professional and trading classes are so especially exposed. The middle class of society would appear almost to be divided into two parts: the one is engaged in a perpetual and never ceasing effort to maintain a fair position in the world, and to ward off all semblances of want—of poverty; whilst the other expends its best energies in a meaningless ambition—a morbid desire to take rank in the world. The first named are entitled to our best sympathies, and their shortcomings must ever be deplored; and more particularly when these said "shortcomings" prove so fertile a source of lunacy. The second is doomed to disappointments—to hopes blighted—and promises (of worldly success) broken. The consequence of these, on a nervous system already too susceptible of all external impressions, may be anticipated.

Confining my attention for the present to the younger members of the family circle, it is observed that mental disorders generally show themselves after the age of puberty. At this period of life, a general revolution of the whole system takes place: our existence, which until then might be called *individual*, now becomes *relative*. In childhood and early youth, we have especially lived for ourselves; we now, according to the laws of the creation, exist for others. The power of procreation in the human male rarely exists before the age of from fourteen to sixteen; until then the generating animalcula, called spermatozoa, are not to be found in the vivifying secretion. Instinctive impulses, associated with this development of nature, now act both upon his corporeal emotions and his mental faculties. Until this most important epoch of his existence, nature has only been busied in the growth of the individual, in its physical developments: all the mental faculties of the child and the youth are exercised for the purpose of preparing both the body and the mind for their future functions. His passions may be vivid and violent, but they are of an ephemeral nature: in short, his thoughts, his pursuits, are childish—his notions puerile. At the age of puberty, a new order of functions elicits desires and wants which have been until then unfelt. All nature seems to bear a different aspect: imagination, on Icarian wings, takes a bold flight to unknown regions; the limits of the

* See the late Laman Blanchard's remains of Miss Landon. (L. E. L.)

universe become unbounded. We feel that we are born to a new life; according to our temperament and our susceptibilities, our passions assume a greater or a less influence over our intellectual power. At this stage of our existence, we may say, arises a conflict between the mind and the body; spirit and matter contend for supremacy; and rarely is the antagonism commensurate in the result. The impulses of a new nature overtake us; and these give their very colouring to every day life. After short experience, however, there are found obstacles to encounter on which we never calculated; "our pride, our vanity, are crushed; our fondest hopes blasted ere they were well entertained; our expectations are baffled; our strength set at nought by the stronger; our very weakness becomes the theme of ridicule amongst creatures weaker than ourselves; the brain is bewildered by contending and conflicting thoughts, until a temporary delirium ensues. Now, all the passions of ambition, love, jealousy, hate, revenge, assume a too fatal sway. We no longer seek to emulate our playmates at marbles, top, or cricket: the game of life has commenced; the race to fortune and to fame has begun; we seek to satisfy our lust and our love—to gratify our avarice and our thirst of power. Disappointed, distracted, madness is often the result; and then not infrequently is the fatal hereditary predisposition to insanity developed in all its terrific manifestations. Our passions have deranged the calm circulation of our blood—the functions of our digestive organs; the brain, the heart, the liver, the stomach, every viscus in our organisation, and every plexus of our nervous system, are now in an abnormal state of being; and the germ of morbid action, when transmitted in our embryo state, is fecundated with mental or bodily disease."

In treating on the rise and progress of certain "physical causes of insanity" common to the age of puberty, the late Dr. Millengen writes thus: "Emancipated from parental restraint or scholastic discipline, according to his temperament will the youth rush into the vortex of life: he will seek to indulge in every pleasure hitherto forbidden or withheld; or, brooding in ascetic moroseness on visions of future distinction, he will seek for power in cloisters or in camps; join in the mirthful revelry of his companions, or plod in his study over diplomatic or theologic volumes." "Can we then be surprised," he asks, "when we find that it is after this convulsive period of life that mental aberrations, in their various forms, are first observed; sometimes ushered in by maniacal violence, at other times preceded by what are called oddities and eccentricities? It is also at this epoch that the results of a good or a deficient education are observed. The tree, hitherto barren, now brings forth wholesome or noxious fruits; and the moral husbandman who reared the young plant now feels proud of his labours, or shudders in viewing the abortion, as Frankenstein quailed in the presence of the monster he had created."

If the period of puberty thus operates a painful revolution in the whole organisation of man, *woman* is equally subject to similar laws; and she has perhaps still more arduous obstacles to encounter in this climacteric struggle between instinctive impulses and her duties—a struggle rendered more difficult in the ratio of the compulsory and artificial concentration of all her intuitive emotions, when nature, in her convulsive throes, is compelled to assume the mask of apathetic calmness. In this revolution, the energies of the brain or of the sensorium of woman are less called upon than the sympathetic system of nerves; and hysteria, in its multiplied and anomalous forms, warns us of the rapidity and the exaltation of the progressive development of all the functional organs of the sex.

It is not always thus, and alone and singly, that the young man or maiden is seen to become afflicted with insanity. The former may have seized on the liberty of action presented to him; he may have rushed into the vortex of life; he may even have abused the powers and faculties so beneficially given to him; and, what is more, have reaped the anxieties and physical sufferings inseparable from the too ardent pursuit of every kind of gratification: he may have done all this, and may yet have preserved the mental faculties intact—his mind sound. The latter may have battled with success against the "obstacles" presented to her; may have guided her "intuitive emotions" so well and faithfully; may have overpowered, even directed, the "climacteric struggle" which preyed within her, so successfully; and, what is more, escaped the multiplied and anomalous forms of hysteria; that the period of puberty has been to her but one of pleasure, and the source of improved health and greater happiness.

The buoyancy of spirit so natural to the earlier years of both sexes; the hopes which hover about youth; the elasticity so inherent to the feelings of those whose experience is in the future,—all tend to defy the power of diseased action in the system: but to early and imprudent marriages must be referred the most lamentable consequences—consequences not less inimical to mental health than to a fair success in life. Improvident unions bear sad fruit. The pangs of poverty are ever sharp, and keen, and painful; but how much more so do they become when seen exerting their baneful influences on the mind and body of one whom we sought but to love and cherish. In enumerating the remote causes of insanity, it is quite impossible not to give prominence to this one, inasmuch as it affects not only those primarily concerned—*i. e.*, the wedded couple—but not unlikely a numerous progeny. Under the protracted pressure of disappointment, blighted hopes, and straitened circumstances, the path of life loses its fascinations, and, after a little while, a bitter despondency succeeds, which too frequently so fastens on the mind that it is no longer able to maintain the contest. If, under such circumstances, children be born, all the cares and difficulties of the young couple are necessarily much aggravated; and, as a sequence to the whole—a climax of the one fatal step into real life—one or the other party falls, a prey to the violence of his or her emotions (affections), weighed down to earth by "burthens which they both fondly fancied would have been more easily borne if divided with a companion of our weal or our woe".

The above affords an example of those belonging to the middle class of society, of which I spoke just now as "engaged in a perpetual and never ceasing effort to maintain a fair position in the world, and to ward off all semblances of poverty". There are other "imprudent marriages"; and such are hardly less fatal to the happiness and wellbeing of the parties most concerned. Though no pangs of poverty may be experienced, or even straitened circumstances endured, but, on the other hand, riches and rank throw their attractions and delights in and about the domestic circle; yet do pale and gaunt ambition, and mean desires, obtrude and fasten on the mind; and so it is that the best feelings of our common nature are subdued to a mean and despicable selfishness, which, rising to excess, and failing to realise its objects, is hurled back on its possessor, but to prostrate and enfeeble the mind which gave it birth. I could enumerate several instances of insanity thus developed in the early passages of life. This latter is an example of those belonging to the middle class of society, to which I referred above as employing "its best energies in a meaningless ambition, a morbid desire to take rank in the world".

It will of course directly occur to you that the several and remote causes of mental alienation to which reference has been above made, are in no two cases attended with precisely the same effects, even in so far as the development of diseased action is concerned. Supposing, for the sake of argument or illustration, that an individual has not inherited any kind of tendency to insanity; that he is without any hereditary predisposition to cerebral derangement; that his constitution is sound, and the several temperaments so well and proportionately mixed that he would seem to realise the *mens sana in corpore sano*. Suppose, then, such a person accidentally exposed to a sufficient cause of mental disorder; to overpowering grief; to domestic affliction of any kind; to sudden reverses of fortune; and so on: it will be seen that the indications of disease in him will depend, in so far as their individuality and specific character are

concerned, on the constitutional idiosyncrasies present. The temperament it is which in each of us present marks the degree of susceptibility or impressionability to external excitants, and which measures the force of our various passions and desires; the same it is which takes cognizance of the probable influence of our reasoning faculties in checking and subduing their exigencies.

You are aware that by the temperament is meant the quality of the nervous organism—that portion of our physical structure which receives impressions from without. The relationship existing between man and animals and the external world is maintained through the instrumentality of the cerebro-spinal structures; and it follows, therefore, that this same relationship, its nature and requirements, will depend in a great measure on the susceptibility and impressionability of the said nervous organism or cerebro-spinal structures.

The sequel will prove to you that, whilst the temperament in man is the index to his mental health, it is hardly less so in him to the particular manifestations of psychical derangement.

I beg to present to your attention these drawings, representing the four principal temperaments. I would have you compare each with the other of them, and notice their well marked individuality and specific differences. You will find that not only is the *tout ensemble* of any one of these faces altogether unlike the rest; that the general form and relative proportions of either of them is altogether dissimilar to the other three; but also that, in reference to any part or feature of a given face, the same fact obtains; that is to say, if you examine them with attention and critically. A better plan is perhaps to compare those two, the most unlike; for instance, this face, which represents the nervous temperament, with this, which embodies the characteristics of the lymphatic temperament. That each one is the index to a state of mind and feeling the very reverse of the other, is a fact so self-evident that it need not be insisted on; and that, moreover, presuming the occurrence of a sufficient cause of mental disorder in both of them, the external signs or symptoms of abnormal cerebral action will be found altogether dissimilar in the two subjects.

The form or character of any given case of mental alienation depends doubtless on several causes, and their mutual dependence or junction with each other. Take, for example sake, him of the sanguine temperament, also him of the "ultra-bilious" temperament (so called); expose them both to a parallel cause of emotional suffering, of mental anguish, to a corresponding source or origin of insane feeling or alienation; and you will not fail to remark that the former is a very different kind of patient to the latter; that, in point of fact, there is still maintained a marked dissimilarity between the two; and that the occurrence of a positive disease has failed to approximate them either in feeling or desire, however abnormal in their manifestation these same feelings or desires may have become. The temperament then imparts an individuality equally to him insane as to him sane; both to the madman and to him in the possession and enjoyment of his reason, his moral feelings and affections, etc.

There is yet another element which exercises a powerful influence on the mode of accession and progress of insanity, under whatever circumstances developed. I allude to the cerebral configuration, the size of the brain, and the development of its several parts or lobes; *i. e.*, their comparative potentiality. Putting the consideration of temperament on one side, and forgetting its very existence if you please, you will directly perceive that a derangement of the brain's functions, in an individual possessed of an organisation such as is shown in this drawing, must prove a very different affair, and present a very dissimilar character, to the same occurring to one of this cerebral conformation. The principle herein involved may be extended without limit, and be considered to include the mass of the inmates of any county lunatic hospital.

The temperaments are described as of four kinds, and as accompanied by different degrees of activity of the brain. By common consent, they have received the names of the sanguine, bilious, phlegmatic, and nervous. The temperaments are supposed to depend upon the constitution of particular systems of the body. The lungs, heart, and blood-vessels, being constitutionally predominant, give rise to the sanguine; the muscular and fibrous systems, to the bilious; the glands and assimilating organs, to the lymphatic; and the brain and nerves, being predominantly active from constitutional causes, seem to produce the nervous temperament. The different temperaments are indicated by external signs, which are open to observation: thus, the sanguine is indicated by well defined forms, moderate plumpness of person, tolerable firmness of flesh, light hair inclining to chesnut, blue eyes and fair complexion, with ruddiness of countenance. The brain partakes of the general state, and is active. The late Dr. Millengen gives the following psychological description of the sanguineous temperament, viz: "The mind may receive with great energy and exaltation the impressions transmitted by the senses; but these perceptions are so multiplied that they are not apprehended with exactitude, or faithfully retained, being much more vivid than reflective. The conception may be prompt; but, from the facility with which the sanguineous fly from one idea to another, their judgment cannot be relied on: ever anxious for excitements which leave but feeble traces of their transient influence—gifted with a brilliant imagination and a tolerable memory, they are ever disposed to come to hasty conclusions." The disposition of the sanguine man is said to be passionate and violent, but not vindictive; he is a pleasant companion, and an ornament to the convivial circle; but given neither to stability in friendship nor fidelity in love. The diseases which afflict him of a sanguine temperament partake of a similarly active and tumultuous character. When sanguine people labour under mental aberration, it takes the form of *mania* in by far the majority of instances; and, unless the symptoms are relieved by appropriate treatment, the case becomes quickly marked by great exhaustion. The disease sometimes comes comes on suddenly, and is then not infrequently indicated by an instinctive impulse to violence. A boy, of a decidedly sanguine temperament, became all at once maniacal, and under the impulse of conduct as ferocious as it was uncontrollable; he sought the lives of those about him, pursuing them about the house with a carving knife. He was fortunately secured by some passers by, and mischief was thus prevented. I found him much excited and delirous, with a hot skin and flushed countenance. The abdomen was full and hard, and pressure thereon seemed to be associated with certain signs of pain. Six grains of calomel were administered, and this was followed by nauseating doses of tartrate of antimony. On seeing him after a few hours, I was shown some remnants of a tapeworm which had escaped from him. A full dose of castor oil and turpentine acted freely on the bowels, and brought away a large amount of offensive fæcal matter, mixed with more pieces of tænia; and my patient was restored to health. The predisposition of the brain and nervous system to exalted and abnormal action, as an accompaniment of the sanguineous temperament, is herein well shown. The probabilities are that, if the lad mentioned had been of a lymphatic temperament, the symptoms would have never reached the climax they did, but would have been limited to those of an ordinary character.

The bilious (choleric) temperament is recognised by black hair, dark skin, moderate fulness, and much firmness of flesh, with harshly expressed outline of the person. The functions partake of great energy of action, which extends to the brain; and the countenance in consequence shows strong, marked, and decided features. The bilious is frequently associated with the sanguineous temperament; and it is said that this was the case in the persons of Cromwell, Charles XII, Peter the Great, and Napoleon: and if so, there would appear much reason to believe in the assertion made, that "most men of this temperament are irascible, vindictive, and cruel; equally susceptible of ardent love, of fierce jealousy, and of unmitigated hatred."

A severe, haughty, and unapproachable demeanour, is not uncommon in persons of the bilious temperament. They are sturdy and overbearing in their doctrines and favourite theories, whether right or wrong, in the rostrum or in the pulpit; and often, by the well arranged and systematic delivery of the opinions, they will succeed in coercing or frightening into concession many who were previously their determined opponents (Millengen). Men of this stamp, however, are always found in *earnest;* and when the bilious temperament is united with a favourable cerebral development, much real good is to be anticipated from them. Among the insane, those of a bilious temperament suffer from mania as a very common rule. The general activity of the emotional feelings and the passions during sanity will prepare us for their excess and extravagance under circumstances of disease. "Ambition having been the chief stimulus of their former life, their exacerbations will partake of the same character; and they will indulge in the wildest and most extravagant flights of a prurient imagination, or in the desperate outbreaks of offended vanity and subjugated pride. The ruling pursuits of former life still predominating, the notions of these lunatics are not unconnected, although they may be extravagant." (Millengen.) I have a gentleman at this moment under my care, of a well marked bilious temperament; the pursuits of his former life have been those belonging to the turf and the card-table; and, at the present, his chief ambition is to enumerate the great successes, the unparalleled achievements, which have attended him in his past career. He tells me literally that he has bred *millions* of horses for his own stud; that he has acquired no end of wealth; that he is "the most perfect man", and combines within himself the united genius of a Mozart, a Shakespeare, a Napoleon, a Herschell, a Paxton, etc., etc.

Some writers describe the atrabilious or melancholic temperament as a seeming modification of the bilious or choleric temperament just considered.

From what I understand of these views, it would seem that the atrabilious or melancholic temperament is the latter named (temperament) with "the sanguineous system weak and irregular," instead of "the head and the heart in a constant state of reaction," and with "the biliary organs in a constant morbid action," instead of "the liver and the biliary system" predominating. In the atrabilious or melancholic temperament, then, the sanguineous system is deficient in power, whilst the biliary functions are in excess; and in the bilious or choleric temperament, there is considerable sanguineous excitement, whilst the liver and the biliary system merely predominates. I am inclined to believe that they are but varieties of the same temperament; and that such varieties or modifications, more properly, are the consequence of the accompanying cerebral configuration or development. Certain it is that those of a bilious or choleric temperament, unlike those of a sanguineous temperament, when suffering from mental disorder, commonly manifest a very evident despondent feeling, a large share of melancholy. Fear, like any other primitive mental faculty or power, may and does, under circumstances of disease, run riot, and so degenerate into an extravagant and dark suspicion, absorbing the whole nature of the patient in gloom and wretchedness; and this may occur both as a mere predominant symptom of general insanity (mania), or as a form of monomania or partial insanity (melancholia); and what is more, may happen equally to either of the temperaments (or any of them) already named.

Dr. Millengen appends to his notice of the "atrabilious or melancholic temperament," the following terse description of insanity, when seen in such a conjunction, viz.: "The vacillating countenance indicates the condition of the dismal mind; the eyes sunk in their hollow sockets, the muscles of the face sharp and rigid in their outlines, and the looks restless and vacant, proclaim the convulsive throes of the sufferer. The mind is abstracted and absent; sometimes they are sunk in a deep reverie, at others they are verbose and loquacious in the description of their sufferings and the perils that threaten them. The more unfounded their apprehension, the more gloomy are their fears and anticipations." Demonomania is a variety of melancholia as above described, and is manifested by the persistence of an idea on the part of the patient that he is possessed by evil spirits who torture him, but in anticipation of future torments; and that, moreover, he is denied the bare possibility of ever obtaining the Divine forgiveness.

The lymphatic temperament is distinguishable by a round form of the body, softness of the muscular system, repletion of the cellular tissue, fair hair, and a pale skin. It is accompanied by languid vital action, with weakness, and slowness in the circulation. The brain, as part of the system, is also slow, languid, and feeble in its action; and the mental manifestations are proportionally weak." (Combe.) These subjects are described as good, easy persons, susceptible of kindly feelings; but, to use a common expression, easily put out of sorts; and their sensations and conceptions are usually of a transient nature; their minds are often depraved by effeminacy and sensuality; their love is mostly animal and instinctive, unconnected with any noble and generous association; they are not courageous, yet they display great tranquillity in moments of danger, and would rather quietly sink than struggle with the waves; if their dwelling is on fire, they would calmly walk out, but not exert themselves to put down the conflagration; when hereditary power places them at the helm of a state, a wreck of the vessel may be speedily expected, unless the sceptre is wrested from their feeble hands by a choleric or an atrabilious competitor for power. Those of the lymphatic temperament, when insane, manifest a fatuity, more or less complete, of the mental powers. Such patients you will observe on a visit to a lunatic asylum moping or sitting about in a listless and apathetic manner, indifferent to nearly everything and everybody. More like big children than anything else, they require a more or less constant supervision; negligent of their personal appearance, they exhibit a physique the very reverse of agreeable. The countenance of the lymphatic madman distinctly enough pourtrays the mental inaction which characterises him. Watch him narrowly, and you will presently see a languid and meaningless smile steal across the features, then an idle gravity of countenance, or inane laugh, is observable, denoting an indolent vacuity of thought. Any kind of opposition or control produces a dogged and sulky obstinacy, but it rarely excites any violent reaction, although they will not unfrequently betray a malicious resentment. As may be expected, from the comparatively few persons belonging to the lymphatic temperament, the inmates of lunatic hospitals comprise but a small number answering to the above description of fatuous patients, barely 5 per cent., or 1 in 20.

The nervous temperament is recognised by fine thin hair, thin skin, small thin muscles, quickness in muscular motion, paleness of countenance, and often delicate health. The whole nervous system, including the brain, is predominantly active; and the mental manifestations are proportionally vivacious. Men of this constitution represent a condition of being the very opposite to that described as belonging to the lymphatic temperament. It is sufficient only that you look in the face of a man with a nervous temperament to be assured that he is all sensation. The great preponderance of the nervous organism it is which gives him those vivid susceptibilities which so oppress him. His acute feelings and keen relish for novel excitement and sensual enjoyments render him the subject of frequent disappointments, and hence he is as fickle as he is selfish. There are vast numbers belonging to this temperament within the walls of every hospital for the insane; and, as you may expect, they suffer from mania. You see them all energy, all bustle, moving rapidly to and fro and here and there, shouting, exhorting, and declaiming, rapid and incoherent in their speech, excited in their deportment, with a countenance ever changing and expressing by turns and in fits and starts the deep and powerful emotions of a too

sensitive nature. You may hear from them scraps of original eloquence which may have been gleaned from Bacon or from Burke, from Emerson or Carlyle, from Byron, Shelley, Sydney Smith, or Macaulay. You may hear from them shreds of true poetic feeling which may have been created by men like Moore, or Washington Irving, or Wordsworth.

When females of the nervous temperament go mad, they prove, not unfrequently, the most troublesome of patients. Their movements are so rapid and untiring, their speech so incessant, their conduct so mischievous, and their whole behaviour so extravagant and self-willed,—that is, during the acute stage of the disorder,—that your whole ingenuity will be taxed to carry them safely through the attack or paroxysm. In such patients, the cerebro-spinal functions, one and all, appear to have assumed a new being, to have reached a climax of unrest, and to vie with the very elements in discord and danger. Should the disease pass into a chronic form, various hysterical and convulsive affections show themselves, and these deserve much attention. A female will tell you, perhaps, that she eats but little, in the hope and expectation that this will create an additional interest in her case; presently she will refuse all food, except what she can obtain by stealth. A female patient at Colney Hatch practised this deception from time to time. I cured her of the trick in rather a summary way. I pretended to believe that she really did refuse all food and sustenance, and then insisted on feeding her with the aid of the stomach pump; it was not found necessary to repeat the operation. A female patient at Hanwell pretended she suffered from retention of urine; this went on so long only as the catheter was employed for her relief; at length, feeling persuaded that the retention was feigned, I discontinued its use; we heard no more of "the complaint of the bladder." Some time since, I was desired to see a young woman, of a decidedly nervous temperament, and suffering from an attack of hysteric mania. I found her hands tied to her sides, and, moreover, covered up in stout leather pouches; I was told she had bitten hands and fingers so much, that they were covered with wounds. I had all restraint removed from her, and the hands and arms left at liberty. Feeling that there was no longer any interest taken in her morbid appetite, nor any anxiety felt for the fate of her hands and fingers, she directly forgot her biting propensities, and in a few weeks was convalescent. No class of patients manifest a more continuous and perverse moral sense than this one, the *hysteromania* class, if I may so designate it.

Sufficient, then, has been said to show you that there is something like a relationship between the several temperaments and the various recognised forms of alienation; it must, however, be borne in mind, that there must ever be a certain amount of correspondence between the cause or origin of a given case of mental disorder and the specific indications of the same. It is quite impossible to even imagine that the origin of, or the antecedents to, insanity, in an individual of either of the temperaments above described, can be without their effects on its mode of accession and development, modified, of course, and, as you are at this time well prepared to admit, by the configuration of the brain.

But there are mixed temperaments; in fact, there are few of us who present else than such; and hence does it follow that mania, melancholia, fatuity, and so on, but rarely preserve their identity for any length of time, that these and the other forms of insanity alternate with, and pass, by insensible gradations, into each other. In my first lecture, you will remember, I have dwelt on and illustrated this position.

The influence of temperament on the mental manifestations, both under circumstances of health and disease, is an interesting subject for inquiry; and that it is so, we have the ample testimony of the celebrated Pinel. He writes thus: "The violence of maniacal paroxysms appears to be independent of the nature of the exciting cause; or, at least, to be far more influenced by the constitution of the individual, and the peculiar degree of his physical and moral sensibility. Men of a robust constitution, of mature years, with black hair, and susceptible of strong and violent passions, appear to retain the same characters when visited by this most distressing of human misfortunes. Their ordinary energy is augmented to outrageous fury. Violence, on the other hand, is seldom characteristic of the paroxysm of individuals of more moderate passions, with brown or auburn air. Nothing is more common than to see men with light coloured hair sink into soothing and pleasurable reveries; while it seldom or never happens that they become furious or unmanageable. Their pleasing dreams, however, are at length overtaken by, and lost amidst, the gloom of an incurable fatuity. Those of the greatest mental excitement, of the warmest passions, the most active imaginations, the most acute sensibility, are chiefly predisposed to insanity. A melancholy reflection", adds Pinel, "but such as is calculated to call forth our best and tenderest sympathies." However pregnant with sound principle, and even truth, are the preceding remarks, we shall do well to remember that psychological medicine presents, from out of nature's laboratory, not unfrequent exceptions to the rules wherewith the ingenuity of the medical man may encompass it about; thus, some short time since, I had under my care a highly respectable young woman "of mature years, with black hair, and susceptible of strong and violent passions", who not only did not, when attacked by mental disease, "retain the same characters", and whose "ordinary energy" was not only not "augmented to outrageous fury", but who, under the sad and humiliating influence of an outraged "conscientiousness", (brought about in the intricacies of a love affair, and which resulted in her summarily rejecting the addresses offered, having, as she thought, under the circumstances, acted with much injustice in having so long accepted the same,) presented a mere picture of despair, a dark and gloomy apprehensiveness, truly appalling. Change of air and scene, and mental diversion, with a proper attention to the general health, resulted in her recovery. In this instance, the peculiar nature of the cause it was which brought about the exception to the rule. However, a knowledge of the principles of psychology is what I would impress on your minds; if they take root there, these lectures will not have been delivered in vain.

On Saturday next, I shall treat of the nature and proximate cause of insanity, as revealed by various facts connected with the accession and progress of lunacy, and especially the *post mortem* appearances.

Northwoods, Bristol, July 1855.

VITAL STATISTICS OF CANTERBURY, IN COMPARISON WITH OTHER DISTRICTS.

By GEORGE RIGDEN, Esq., Surgeon to the Canterbury Dispensary.

[*Read before the South Eastern Branch, June 27th*, 1855.]

AN inquiry into the vital statistics of a locality is obviously a source of interest and instruction, since it enables us to compare those of one city or district with those of others, and these again with those of the entire kingdom. By these means our attention becomes directed to some of the most important sources of mortality; and we may be not only led to distinguish those which have a peculiar or endemic from those which have a more universal origin, but by still more extended investigations, we may be enabled to trace such effect to its predisposing or exciting cause.

The valuable reports published periodically by the Registrar-General give great facilities for observations of this character; and by the individual members of this Society directing their attention to this subject in each locality, it is evident that the knowledge thus obtained might be considerably extended.

A statistical district in most cases comprises all the inhabitants within a certain area. This, however, is unfortunately not the case in Canterbury; for in consequence of