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The influence of Sex and Heredity  
in the causation of Mental Disease:  
and a short account of the Insanity  
of Adolescence

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J. G. Ewan M.B. Ch.

In attempting to classify any collection of cases of Mental Disease in the present state of our Knowledge, we find at the outset, that we are confronted with this great difficulty, that whereas in some, definite pathological changes can be ascertained in the brain itself, in others no such changes are discoverable, but they depend for their origin, either simply on some molecular alteration of the nervous tissue, or on the existence of bodily defect or degeneration. Thus then we are forced to base our classification either according to the symptoms which they present, and divide them into cases of mania, melancholia or dementia; or we may view them in relation to accompanying physical diseases, such as epilepsy, gout, heart disease &c. But there is still a third, and what would seem to be a more complete method viz according to the time of life, at which the Insanity makes its appearance, for

this not only indicates the period of its commencement, but points out at least one condition underlying its onset.

In adopting then this latter classification, we are taken through the course of sexual rise, development, maturity, decline and death, and the influence of sex as a factor in the production of Insanity would seem to suggest itself.

Sexuality or the desire to reproduce the species is one of the chief of human instincts, and it is not surprising considering the important position which it holds in the normal mind, that its beginning and ending should prove a source of danger to the unstable.

But great though this source of danger undoubtedly is, it is perhaps much less than would a priori be expected, and that it has certainly been largely overestimated by the popular mind is amply proved by statistics, which show, that it is at the period of fullest vitality, and not at those times that mental disturbance is

Most Common.

For the purpose of this essay I have taken into consideration one thousand cases admitted during consecutive years into the Asylum to which I belong, and though from this number it would be impossible to generalize or draw any definite conclusions, yet a contribution of facts however small, is if not of much importance, at least of some value. Of these thousand cases on which I shall base my results, and from which I have omitted all cases of Idiocy and Epilepsy, I find that the sexes were in the proportion of 448 males to 552 females, and out of these numbers I have included 61 males and 161 females, as suffering from the various forms of Insanity caused in part by the rise decline or operation of the sexual functions.

But before I enter into any more detailed account, perhaps it would be as well to describe in a few words the district from which the patients

were drawn and to indicate briefly their social environment, before admission into the Asylum, for no doubt any statistics of Insanity is apt to apply more to the particular district or county than to the nation at large. The County is a purely agricultural one, there are no large towns, no manufactures worthy of mention, and no mines, but the land and the sea for the most part support the population so that it may be said of the inhabitants, that they live as close to nature as is possible at the end of the 19<sup>th</sup> century.

Yet in this rural district, the ratio of the insane is 34 per 10,000 of population, compared with 29.68 for the rest of England, so that here at least it is shown that centralization, the crowding into cities and towns, and the evils attending on overcivilization are not necessarily prominent factors in the production of mental disease. Alcoholism too, which as a cause ranks so high in other parts of the country is almost unknown. But ignorance and defective

education, by breeding and maintaining superstition, together with poverty and adverse circumstances take the place of those more apparent ills, and tell with greatest effect the former more especially at the time of sexual incidence, and the latter during its decline, and in the puerperal state.

From the figures previously mentioned - 461 males & 862 females - it will be observed, that it is among the females not only relatively, but in the aggregate that the greater number of what I call sexual cases occur; and this is not to be wondered at, when it is considered that in the female in connection with the reproductive functions the changes are so much more numerous, and so much more important, than those in the male, and it would naturally follow that there is a greater disturbance at its rise, decline and special activity. Up to the age of puberty there is little distinction between the two sexes, and during this period, few

Cases of mental disease are met with, but when differentiation takes place, when the sexual and reproductive functions begin and develop, during what has been called the stage of Adolescence as many as 90 out of the thousand cases are found to have occurred. Of this 90, 41 were males, while 49 were females, so that at first sight it would appear that the female adolescents outnumbered the males, but when it is taken into account that there were only 448 males to 552 females, the percentage of the former (9.1) was found really to exceed that of the latter (8.8), so that among my cases at least, at this period, the stress attending the female sex was not in evidence. But when I further compare the two sexes at the climacteric, or end of sexual life, I find that the balance is greatly to the side of the females, for in them during a long number of preceding years, a large proportion of their activity has been spent in connection with the sexual and reproductive functions, and

when their involution takes place, there is necessarily a great preparation of mental disturbance in what has been up to that period a normal mind. To fix any definite age or limit, as the time when a man ceases to be able to exercise the sexual functions, is impossible, and by many the male climacteric is looked upon as non-existent, but when we meet with cases so closely resembling in their characteristics those that have been recognized by all as climacteric in the female it does not seem to me that they should be discounted altogether. Thus I have included among my cases as many as 20 or 4.4 per cent, which I have set down as climacteric in their origin, not merely from their commencing at any particular limit of age, but largely from their mode of onset, and particularly from the symptoms which they have exhibited. The female climacteric is much more easily settled accompanying as it does the cessation of the menstrual flow, but the age limit varies considerably in different women, in some being as early as 45-

and in others as late as 55, so that a whole decade is included in this period. But as with the males so with the females each case must be judged on its merits, and all women who became insane between the ages of 45 + 55 cannot be considered as cases of Climateric Insanity thus we have to omit from our lists cases of recurrence, of organic brain lesions and many others of a complicated origin. But even after omitting all these I find that 58 women or a percentage of 10.5 had as far as could be traced one or rather its involution as the main cause of their attack, thus compared with the males at this period there is a difference of 6.1 per cent. To sum up then these figures it is seen that while out of 448 men, 13.5 per cent could be classified as Adolescent or Climateric, as many as 19.3 per cent of the 55-2 women occurred during these periods. And to this last number must be added as being included under cases of Sexual Insanity 9.7 per cent, representing

those caused by pregnancy, parturition or lactation, giving a total of 27 per cent for all female cases.

Further if we take the two sexes together, I find that out of the thousand cases as many as 222 or 22.2 per cent, can be classed as occurring at one or other of the sexual periods and due either to the rise, decline, or the result of the activity of the sexual functions. So that sex in its bearing especially as a predisposing factor in the production of Insanity is found to be of considerable value, for there is no other cause with the exception of Heredity that can at all approach it in importance and it is at those various periods that the so called moral troubles have the greatest effect, acting as they so frequently do, on a mind already undergoing an upheaval from sexual strain. Thus just as religious emotion, love, and nervous shock are often given as the causes of mental disease at the period of Adolescence, so anxiety, domestic troubles, and adverse circumstances rank

Largely as the forerunners of mental break-  
 down, during the puerperium or at the  
 climacteric. But these causes, though no  
 doubt potent, would in many instances  
 be of themselves quite insufficient to  
 initiate a complete loss of mental balance  
 were it not that to a certain extent  
 they act along with and are secondary to  
 those sexual changes; for if the mind were  
 not already weakened by those peculiar  
 epochs, it would soon rebound and regain  
 its former vigour. Thus it is that  
 the manifestations of Sex, both from  
 their physical and mental aspects, acting  
 and reacting on each other, bring  
 about those abnormal changes, often  
 accompanied by sexual perversions  
 of a most marked kind, which  
 are so commonly met with, and  
 which are of such a distinctive nature,  
 that they have been separately  
 described under the heads of Adolescence,  
 Climacteric and puerperal Insanity.

In addition to the influence of Sex, which I have in some manner endeavoured to estimate in the preceding pages, there is another factor which no doubt is of greater importance, and which I shall afterwards show is often at work side by side with those sexual changes in the production of Insanity - I mean Heredity. For although it is extremely difficult to be sure of the part played by inheritance, yet it is tolerably certain, that a large proportion of the insane, are insane because of the Insanity of their parents. Thus I find that among my thousand cases as many as 242 or 24.2 per cent had a distinct ascertainable hereditary taint, and that this proportion large though it may seem is much too small is shown by the fact that whereas in the earlier years of my statistics, only 14.5 per cent are mentioned as having this predisposition, as large a number as 33 per cent was discovered in the later. And such a discrepancy may be accounted for, partly by the greater reticence of the relatives from their anxiety

to hide what was formerly more considered a social stigma and disgrace, but perhaps it is more due to the fact that year by year we are better able to ascertain and trace the history of the patients, their families and immediate progenitors. But that much remains to be done in this direction is evinced by the following:—

On the 19<sup>th</sup> April 1890 E. C. was admitted into this Asylum, on the 24<sup>th</sup> B. B. and on the 6<sup>th</sup> of May P. S. the two latter being sisters, and the former their niece, and as these cases all exhibited the same somewhat stuporous condition, and rarely spoke or took notice of anything, it was months before their relationship to each other was known—and yet this family was as might be expected saturated with Insanity.

In looking at this question of Heredity the truth of which is admitted to a certain extent by all, it is seen that Heredity is not a single, but a many headed monster, and includes within its domain, not only the results of

Direct transmission, but also of consanguinity and intermarriage.

The transmission of bodily defects or monstrosities is well known in the animal world, both among the lower animals and in the human species, thus for example it is not unusual to find that the deformity known as hare-lip has affected several members of the same family, and further to have recurred in the children of those thus affected. And Blond Sutton quotes a case occurring among the inhabitants of a certain isolated district in the South of France where "at the end of the last century scurvyism, both of the hands & feet, suddenly appeared, and in 35 or 40 years, almost the entire population was thus affected." It is well known too that children often bear the physical characteristics and even features of their parents or of some more remote progenitor, or may inherit from them some trait or peculiarity and thus there is often found a family resemblance not only in appearance, but even in gesture

Landwriting or other manifestation of a complex nature. And as these depend no doubt on some special arrangement of nerve tissue, of a subtle and elaborate kind, especially when compared with the gross changes that underlie Insanity, surely it may be taken for granted that since the one can be transmitted by inheritance that the other can also.

It is not however the actual Insanity itself that is handed down, but rather a condition of instability in the mental fabric, and that this instability is due for the greater part to inheritance need not surprise us, when it is borne in mind that every man must be to a large extent the outcome and product of his ancestry. For although circumstances and environment doubtless play a part in moulding the character and modifying the tendencies transmitted to the individual, yet when the long preceding ages during which the character has so to speak been built up are taken into account, and compared with the comparatively short period, during

which circumstances can act, the influence of the former must of necessity be much less than of the latter. Now in Insanity, where there is a disorder or derangement of the highest nervous centres, there must either be a great force producing those immense changes, or the underlying tissue must be of an unstable character, for in the mental world as in the physical the amount of disturbance required to upset any arrangement depends largely on the stability of that arrangement. Thus it is constantly seen that an almost similar train of circumstances acting on two different individuals, in the one case where there is a condition of stability, the equilibrium is unaffected; while in the other where there is a strong neurotic Hereditary predisposition, there is a complete mental upheaval and the balance of reason totters and it may be is overthrown.

But just as in the case of Sardinia already alluded to, where as soon as the district was opened up by more frequent communication with the outside world,

and intermarriage among its inhabitants became less common, the anomaly almost entirely disappeared, so in the case of Insanity, transmissibility would in the course of time cease, were it not for another factor which must be duly estimated in our consideration of the influence of Heredity. For if each marriage meant the introduction of new elements, progressive degeneration would be prevented, for gaps would be filled up, stains and blemishes blotted out, and our equilibrium would be established, and instead of a collapse of some cells & the substitution of others producing a race of weak minded or insane, the successive crossings would rapidly efface any particular characteristics and bring the individual back to the general healthy type. But strange as it may appear, it is no doubt a fact that those with a Hereditary predisposition to Insanity frequently intermarry with others with a similar family history - and I have often found on admission to the Asylum that

a patient was related, both on the father's side and on the mother's to those already suffering from mental disease. But not only is this peculiarity frequently noted, that the two tainted cells so to speak fuse and divide again, but we find what is generally known as Inbreeding, where the population of a certain district freely intermarry with each other, and as no new blood is admitted, the stock becomes exhausted and in the end there is a mental weakness or defect, often producing Idioty or Imbecility. In this county the result of this inbreeding is well seen particularly in two districts where the people are mainly engaged in stone quarrying, and where as this trade this trade is a close corporation, none being allowed to work unless natives, free intermarriage takes place - for there mental enfeeblement is common, and if a case of ordinary mania occurs the tendency is more in the direction of dementia than of Recovery. Heredity then viewed in relation to mental disease would seem to act, at one time

from direct inheritance, and at another from consanguinity and in the Southern & Western divisions of this Country the latter would appear to be the main cause of the Hereditary taint, while in the East & North persons who have already suffered from Mental Disease, apart from any question of inter marriage, are the accredited progenitors of predisposed cases.

Another point might be mentioned as of great interest especially to Asylum physicians, that in reference to the offspring of recurrent cases, for unfortunately it is quite in the ordinary sequence of events to chronicle an addition to the family, during the periods between the recovery and relapse of one or other parent. For naturally, at these times especially, a condition of instability would be handed down, and in those children it will be particularly found that the ordinary stresses met with in the struggle for existence will prove too much for their unstable nervous tissue.

In those ways then Heredity acts as

a potent factor in the production of Insanity, and on further consideration of the cases in which the Hereditary taint was discovered, it was found that in those cases which I have called sexual that it was by far the most common. For out of the 222 cases in which sex was indicated, Heredity was also ascertained in 102, giving a per centage of 45.9 which is large when compared with 24.2 for all cases, and very large when compared with the remaining 778, where it was only accredited in 140 or 17.9 per cent. Thus it would seem that it is in those cases, which have already Sex as a distinct relation, that Heredity too is most often a factor. But while this is so, it is not true equally in all kinds of sexual Insanity, for at the Climacteric the Hereditary Taint was only found in 35.8 per cent, while at the time of pregnancy, the puerperium or Lactation it was met with in 44.4 per cent, and at the period of Adolescence in as many as 55.5 per cent.

From these percentages then it is seen that while Heredity so often plays such an important part in the causation of Insanity, that it does so most prominently at the periods of sexual stress, and of these particularly at the time of Adolescence which is as might be expected, seeing that the rise and development of Sex is the first great strain met with in life's history. And when to this strain there is added a brain already in a condition of mental instability a considerable disturbance or even a break down would be the natural result.

Before leaving this question of Heredity, and as illustrating the results of direct inheritance and the intermarriage of tainted individuals, I shall sketch shortly the history of one family, several members of which are at present in this Asylum, and of which there has been at one time four generations known to be mentally afflicted.

Some fifty years ago there was admitted into this Asylum A. B. a pale, anxious careworn widow, about 55 years of age, who had had a large family, many of whom died in childhood, and who was said to have had several relatives similarly affected. She never really picked up either mentally or physically and died five years later from brain degeneration & bronchitis.

Within a few months of her admission her eldest son B. B. a young man aged 33, married & with 3 children, was brought to the Asylum, suffering from melancholia with delusions. He made a fairly good recovery, and was discharged only to be readmitted and again discharged on three different occasions until finally he remained until he died a hopeless dement about four years ago.

Of A. B.'s other children C. B. is at present in the Asylum a case of incurable mania with many fixed delusions, and D. B. who married

a man various members of whose family have been insane, had several children all of whom as far as can be learned, were either weak minded or died from 'decline'.

Of B. B's children 4 are still living, 3 of whom all females are at present in the Asylum. Two of these are married and the third is a spinster the subject of delusions of a hypochondriacal nature. Of the two that are married S. R. is low, morose, suicidal and superstitious and E. D. is a case of Climateric Insanity. On further tracing this history I find that S. R. has one child an epileptic, & another married to a man with a strong Hereditary predisposition to Insanity has already an idiot girl, and her other children bear the stamp of their double neurotic parentage. In the case of E. D. who is married to a strong healthy labourer, and who has 8 children, one only J. D. has as yet shown signs of breakdown, and he was in the Asylum for 3 months

in 1890, suffering from the mania of Adolescence, and made a good Recovery.

Having now concluded the first part of this essay, in which I have endeavoured in some manner to set forth a few points in relation to the working of the two factors Sex and Heredity in the Causation of Insanity; and after having incidentally alluded to the fact that these two are so often met with side by side, and that most markedly at the period of sexual development, I shall next proceed to consider the general characteristics of and the prognosis in Mental Disease recurring during Adolescence.

Adolescence is the period extending from Puberty to Maturity, but the age at which the former begins, and at which the latter is arrived at, shows great variance with different individuals, yet if it is necessary to fix any arbitrary limit, most authorities are agreed upon 15 to 25 for males, and some two or three years earlier for females.

During this stage of existence many changes peculiar to themselves, both bodily & mental make their appearance, and although it is with the latter that I am chiefly concerned at this time, yet it may not be out of place to mention briefly a few of the latter.

In the male the sexual organs undergo increase and development, various parts of the surface especially the chin and pubes become covered with hair, and the voice becomes lower in pitch as well as rougher and more powerful — in the female the external and internal organs of generation undergo a considerable increase in size; the mammary glands enlarge; and a deposition of fat takes place in the mammae and on the pubes, as well as over the whole surface of the body' (Carpenter)

In the Adolescent Insane it is frequently noticed that these changes are very imperfect, and that their boyish or girlish appearance is most striking, and further that coincident with their recovery there is often the assumption of a more manly or womanly figure and development.

At this time too the osseous and muscular systems are being completed, but in the Brain the direction is more towards development than actual growth, for it is generally agreed that no increase in its bulk takes place after the age of 17 and histologically no difference can be observed between the nerve cells of the boy of 17 and the man of 37. But when we look at and compare the functions, what a vast difference is found, for it is during this period that all the higher intellectual and emotional qualities, all the desires and passions connected with sexual love and reproduction first make their appearance, and it is only after years of development that complete maturity is attained.

Of the male Adolescent the mental characteristics have been summed up so tersely albeit so unkindly by Carlyle that I cannot do better than quote from the Sartor Resartus where he says "Such gawks are they and foolish peacocks, and yet with such a vulturous hunger for self-indulgence; so obstinate,

obstreperous, vain glorious, in all senses so forward and so forward "Life everywhere is the most manageable matter, simple as the rule of three, multiply your second and third terms together, divide the product by the first, and your quotient will be the answer, which you are but an ass if you cannot come at." But though this description may be to a large extent true to life, and though the male adolescent may be so obnoxious to the soured sage, that he thinks that invisibility "under barrels" during this time, might be of advantage to the rest of mankind, yet to the adolescent himself, this period with its physical and objective side is often one of intense pleasure. Instead of those aggressive and self assertive young men however, we often meet with those more given to day dreaming & introspection, shy and retiring youths, who if they should become insane are most apt to drift into hopeless Dementia.

The female adolescent compares favourably with the male, though she to

Her mature sister may be at times as objectionable, as the male to his elder brother. She is often given to dreaming and castle building, and the emotional side of her nature is much in evidence, she is capricious and variable, at one time perhaps unduly elated with the mere pleasure of living, and at another easily moved to tears on the slightest pretext. But while the male at this period is selfish and self sufficient, the female is frequently stirred at the sight of suffering, and a fit of charity it may be indiscriminate, and soon at an end, is the outcome of her more kindly nature - she too is more easily influenced by the opinions of others, in fact dependence might be said to be the leading feature in the female in contrast with the self reliance of the male. Between these characteristics above described and those of actual Insanity there is no broad line of demarcation, for the normal or physiological shades off by almost imperceptible gradations into the abnormal or pathological, and if once self control be lost, a due sense of the fitness of things

will soon be at an end, and mental alienation will take place.

Adolescent Insanity or as it has been well named the Hereditary Insanity of Adolescence - owing to the large number of cases in which Hereditary predisposition can be ascertained - is caused for the most part to the commotion accompanying the evolution of the sexual characteristics and the attainment of the powers of reproduction, acting especially on nervous already unstable. Thus too it is often found in those cases that the parental training, instead of fostering a moral self control, necessary to the unstable and developing mental life, encourages rather by its teaching and example, a state of vicious self-indulgence, or a condition of gross sentimentalism. Owing to this then we find at this period frequently arise those pernicious vices of masturbation & alcoholism, which if unchecked lead to mental and moral perversion, and the *aequo animo* so much desired or the golden mean is never reached.

Another cause frequently assigned, but

which has been unduly over-estimated is Religion and to tell the laity that a patient is suffering from Religious mania, is sufficient and even looked upon as not so very much out of the ordinary state of affairs. But this so called Religion so frequently plays such an important part in the life of the normal adolescent, that it must be looked upon rather as the outcome or as a symptom, than as an actual cause of Insanity. Of other causes Alcoholism and Sexual indulgence, especially of an illicit kind, are mentioned, but the former in this country is rare, and the latter must more often as in the case of Religion, be considered as a result than as a true cause.

In the previous part of this essay I have alluded to the fact that 90 cases out of 1000 admitted into this Asylum during consecutive years, were suffering from Mental Disease arising during the period of Adolescence, and that out of this 90, 41 were males and 49 were females. Among these cases I have included all

patients of either sex between the ages of 15 and 25, whose attacks would seem to have been simply due to the evolution or development of the sexual functions, and not those complicated with Epilepsy, Childbirth, or any cause of a more complex origin.

When we look at and compare the ages of the two sexes on admission as exhibited in the following table

	males	females.
Between 15 and 16 -	none	6
" 16 " 17 -	2	3
" 17 " 18 -	4	7
" 18 " 19 -	2	4
" 19 " 20 -	4	6
" 20 " 21 -	7	9
" 21 " 22 -	8	6
" 22 " 23 -	4	5
" 23 " 24 -	6	2
" 24 " 25 -	4	1
	41	49

we find that among the males 12 or 29 per cent were under the age of 20 while among the females as many as 26 or 53 per cent took place before this time. But if

it is considered that the female reaches a state of maturity sooner than the male, the age of 18 for the former will more nearly correspond to 20 in the latter, and the per centage for the female sex in the earlier years will in this case be reduced from 53 to 32.6. And further if we take the two sexes together, and divide the age limit into two parts, the first to include from 15 to 20 for males, and from 15 to 18 for females, and the second from 20 to 25 for males, and from 18 to 25 for females, it will be seen that only 31 per cent had their commencement in the first part, compared with 69 per cent in the second, so that it is during the latter period, in the after years of gradual coming to maturity, that the greatest danger to mental health is found.

In the two sexes the symptoms presented by the Insane at this period vary considerably as might be expected from the great divergence in their normal characteristics, so that it will be

necessary to view separately the changes met with in the male, from those which occur in the female. But before I do this I propose briefly to quote a few extracts from the certificates of admission, for the facts detailed therein would seem to me to be often of much interest, these descriptions evincing as they do to a certain extent the manner in which the patient has behaved in his or her own family circle. For no doubt the whole process of the bringing to the Asylum, attended as it is with a complete change of surroundings has often a most marked & immediate effect, and thus it is frequently found that patients brought strapped down or wearing a straight jacket, and who have been quite unmanageable outside, on being placed in the Ward become at once quiet and tractable.

### Males.

Excited, violent and abusive, wanders aimlessly about, violent dislike to relatives.

Excitable, crouches about in corners, spitting

Swearing and destructive.

"Sullen and morose, says he is bewitched by his mother, and must draw blood, that his food comes out of his ears

"Says there are people under the bed, that he has seen God, threatens to drown himself, is sullen morose and clogged."

In the male the chief general characteristics may be summed up as motor restlessness, mental confusion, incoherence of speech, absurdity in behaviour, and in a large proportion a tendency to destructiveness, in fact the symptoms are more commonly maniacal than melancholic in nature.

But depression also is frequently met with accompanied by suicidal inclinations, visual and auditory hallucinations, and delusions which are as a rule subjective indefinite, non-persistent, and frequently of the nature of persecution e.g. that he is to be strangled, that he is bewitched, that his food is poisoned &c.

The chief point about these delusions are their incessant change for as Greisinger puts it "No persistent Ego is as yet formed in which there could occur a lasting radical change: the mobility of this age does not allow single insane ideas to become persistent and systematized as at a late period; but on the other hand the various primary mental diseases having the character of irritation when of a certain duration, lead almost certainly to a state of confusion and dementia."

Another and what is always a grave symptom if indulged in to any extent is the habit of masturbation, which is most frequently found in the melancholic type and which would seem to be due not so much perhaps to any lustful desire, but rather to ennui, anxiety and the impulse to change temporarily the painful mental condition. That however if long continued it will soon lead to secondary degeneration is shown by the fact that out of the 13 Cases of Adolescent Insanity now in this

Asylum who are deemed incurable, 11 are said to have been, and certainly are at the present time, much addicted to this vice.

As examples of the two most common types the one of acute mania leading to Recovery, and the other of mental confusion, accompanied by delusions of a subjective nature, and ending in secondary degeneration the following may serve as illustrations

J. D. aged 20, single, an outter, admitted November 1890. Grandfather died demented mother and two aunts are at present in the Asylum, and many other relatives have been insane, or suffered from the allied neuroses. He had always been a quiet and well behaved youth, until a few months ago when he became excitable, strange and irregular in his mode of life, and occasionally indulged in alcoholic excess. When admitted he was well nourished and in good general health, but mentally was in a state of acute excitement, shouting, singing, swearing, and using obscene

language. He had no idea where he was,  
 took no notice of his change of surroundings,  
 could not answer questions and was quite  
 incoherent. He was also extremely restless  
 continually grimacing and behaving in  
 the most absurd manner. For several  
 nights he slept but little even with  
 a hypnotic, and practically remained  
 in the same condition for about 10 days,  
 when he became quieter though still  
 irrational, rude and abrupt & impatient  
 of all control. Several weeks passed  
 with but little improvement, and during  
 this period he was very variable,  
 occasionally somewhat more collected &  
 even doing a little work in the Ward,  
 but generally remaining dull, listless  
 and apathetic, unless interfered with,  
 when he became ill tempered and  
 aggressive. About the middle of January  
 a change for the better took place -  
 Physically he became stouter & more  
 manly, and mentally more settled  
 and industrious - and as this improve-  
 -ment was maintained he was

Discharged Recovered 3 months after admission and up until now has continued well.

M.B. aged 21, a clerk in a surveyor's office admitted September 1886. Father died paralyzed, and various nervous have occurred in other members of the family, but no actual history of mental disease could be obtained. He had always been a quiet retiring youth, religious and fond of reading, but scarcely ever taking part in physical exercises, and generally inclined to be solitary in his habits. On admission he was undersized pale and anaemic, and with a profuse acne eruption on his forehead & shoulders. He was quiet, but displayed much confusion, and though willingly answered questions was rambling & uncertain in his statements, and abnormally abrupt in his manner. It was said that he was a masturbator, but this he denied.

For several days he was fairly well

behaved, but silly and inattentive, smiling in a purposeless manner and frequently showing signs of irritation, when spoken to. When however he became more accustomed to his surroundings, he was less careful, and on being caught in the act of masturbation, shamelessly confessed to it, and said that he must get rid of it - the seminal discharge - in some way. He now began to consort with his most degraded companions, and unless restrained, openly indulged in his evil habits, and was extremely disagreeable and even pugnacious when interfered with.

After remaining much the same for some weeks, delusions of a hypochondriacal nature made their appearance, and he at one time complained of stoppage of the bowels, at another of pain in his heart, and again refusing to walk owing to fancied stiffness of his knees. He then imagined that he was changed into a bear, a dog, a cat and other animals, and endeavoured in turn to act like these and to imitate their sounds

Signs of physical improvement in the meantime had taken place, but mentally he gradually got lower and more morose, fancying that everyone was against him, then imagining that his food was poisoned, and so again became thin and out of health. For over a year he showed little change, but by a course of extra feeding, tonics and cold baths, he again began to get stouter and mentally brighter. He is now after seven years a hopeless chronic, doing a little work in the tailor's shop, and interesting himself in the petty details of the Asylum, but in a condition more or less approaching dementia.

Some of the facts mentioned about the females previous to admission as gathered from the medical certificates were as follows.

"Constantly on the move, said she was very well off, used obscene language, very destructive and threatens her mother

Said that her father was the devil, that she could see what rising from the dead was

"and that she was saved, restless and screaming, saying she was lost & was attended by Jesus

Very excitable and constantly talking, laughing loudly and singing hymns, very destructive, smashes everything in her way.

"Says she is Jezebel and too wicked to live, that men swear at her, that she cannot sleep being so far from heaven

"She refuses to take food or medicine declaring they are poison, and raves at imaginary objects believing they are going to harm her.

In the female as in the male maniacal symptoms are by far the most common, while states of depression though met with are much less frequent, and Insanity at this period is essentially an acute neurosis, exaltation and excitement, being usually the most marked features. But when depression does occur there is accompanying it as in the male hallucinations and delusions, but these delusions while

chiefly of persecution and so like in character to those of the other sex are generally of a more definite and fixed kind. One feature observed in nearly all the cases of an acute kind, more particularly in this sex, is their relapsing nature, for the patient perhaps after a few days becomes quiet and rational, this change only to be followed by another period similar to the first, and intermissions of almost perfect sanity may take place several times, before she begins to recover or drifts into secondary dementia.

At times in this sex instead of intense excitement the attack is more of what is called a hysterical nature, and difficult to distinguish from true hysteria, which if it cannot be technically included under the term of Insanity is after all dangerously near to it. In this condition the patient is frequently erotic and obscene, completely self centred, and apparently oblivious of all external circumstances, though really taking notice of everything and perhaps drawing deductions in her own perverted way.

In this type delusions mostly grandiose and largely religious in character are frequently met with and impulsiveness is a common feature, but the impulse is more often in the direction of cruelty, or destructiveness, than in attempts at self injury, though suicidal tendencies are often mentioned in those cases. But these must to a large extent be discounted, for they are more often threatened than real, and it is rare to find as we do in other forms of mental disease, any very premeditated or desperate endeavour to take their own life. Thus for example one of my patients threatened in what was called a fit of temper to drown herself, and even jumped into a 'plaster' pond apparently with this intention, but the result was only a wetting, and on another occasion the same young woman wandered on to the railway track, but was careful to avoid a passing train.

Associated with the cerebral disturbance as a physical accompaniment there is often found in the hysterical type

uterine ovarian irritation causing menstrual irregularities or amenorrhoea. This condition of Amenorrhoea occurs also in another class of case, where stupor is the most prominent feature - in these stuporous state the expression is dull and vacant, saliva dribbles from the mouth, the extremities are cold and livid in appearance, and anaemia is often profound.

The three following cases illustrate respectively the relapsing nature of recurrence in, and the stupor met with in the neural disease of the female adolescent - the two former resulting in Recovery and the latter in secondary Dementia.

C. M. aged 18, single, a domestic servant was admitted in October 1885. Her family history was decidedly neurotic - her father having died insane, and her mother was the subject of Epileptic fits. Patient's personal history was however good, and on admission she was stout, well built, with a florid complexion

and the general appearance of a healthy constitution, although at the same time her pulse was rapid and irregular, her tongue much furred & her bowels constipated. She was restless, excited, noisy & generally incoherent, but would occasionally answer a question, though more often when spoken to simply grimaced or laughed in a silly manner.

For five days she was much the same continually talking the greatest rubbish - a mixture of religion and obscenity - when suddenly she became low and melancholy, scarcely ever spoke at all but was dull and listless, though emotional and affectionate. In the course of a few days she was brighter and more herself, but soon again became restless and talkative, noisy & obscene. This relapse lasted only a few days but after being followed by short intermissions of depression and more or less sanity, a second relapse took place. This time she was much worse, more obscene & filthy in her language, very

destructive, and extremely dirty in her habits - and the process of Recovery was much slower, but did not follow as on the previous occasion, a period of depression. But very gradually she became quieter, and though at first flighty and unstable, yet when once improvement set in she soon became tidy and industrious, and after seven months residence was discharged Recovered.

Menstruation which had been in abeyance, set in a week after her return home.

M. J. P. aged 16, single, a domestic servant, admitted December 1885. Family and personal history as far as known fairly good, but was the eldest of eleven children, and had had always to work hard, & perhaps often without sufficient food.

On admission she was thin, pale and much out of health, tongue dry and furred, pulse rapid and irregular, and a well marked hæmic taint.

Menstruation had taken place previously on 3 occasions, but at irregular intervals, and not during the preceding 5 months. The onset of the attack had been sudden, and she was restless, incoherent, & obstinate, refusing to answer any question, or to take notice of anything that was said to her. Some days afterwards, she passed into a more acute stage, shouting and screaming, abusive and violent, impulsive and destructive, and very dirty in her habits. Chloral hydrate + potassium bromide in large doses, only produced little sleep and had practically no sedative effect.

At the end of a fortnight she was quieter and more rational, although erotic, oversensitive, and emotional; but from this time improvement set in, and she was discharged 4 months after admission stout and in good health generally, although the menses had not made their appearance.

In April 1887 she was admitted for

a second time with much the same history as on the previous occasion, and in much the same condition. This attack like the former was characterized by the acuteness of the symptoms, and by the shortness of its duration, for at the end of a month she was quiet, rational and well behaved, and at the end of 5 months was sent out again having made a good recovery.

Menstruation which had never been regular made its appearance about 6 weeks after admission, and continued each month until her leaving the Asylum.

A longer interval elapsed between the second and third attacks, than between the first and second, for it was not until January 1890 that she was once more readmitted. On this occasion she was in better health, and was at first quieter and better behaved, but soon was in the same old condition, and gradually became even worse, more filthy and degraded, and much more

impulsive and destructive. This time too she was much longer in beginning to recover, and the recovery was much slower, so that she remained a patient for over nine months.

The menses which were suppressed on admission, made their appearance about 3 months afterwards, and improvement was coincident with the date of the menstrual flux.

Now three years have passed, and so far she has remained well.

M. H. aged 19, single, dressmaker, admitted May 1886. Father was a drunkard and her mother died from 'decline' while she was still a child, so that her early training was very defective. The exciting cause of the attack was said to be seduction, but of this there was no proof except that the menses were suppressed.

On admission she was in good general health, but mentally was dull & stupid, obstinate and resistive & absolutely refused.

to speak at all.

She gradually became more stuporous, until she was in a condition almost amounting to Cataplexy, standing immovable all day, and keeping her limbs for a considerable time in any position in which they might be placed. For some weeks she remained in this frozen attitude, but after the continued use of cold baths and the constant current, she began to show signs of improvement and by the end of July was fairly bright and cheerful, though mental absorption was not entirely absent. She next passed through a stage of emotionalism and impulsiveness, only to be followed by another period of stupor.

On the same treatment being applied, she again became brighter, but now instead of a return to comparative sanity, degeneration set in, and she is at this time a lazy dirty and untidy chronic, fast drifting into a state of hopeless dementia.

Menstruation first appeared about

seven months after admission, and then there was some slight improvement in her mental condition for a few days, but since that time though the menses have continued regularly there has been no apparent change on the periods.

Having thus described their leading characteristics, and having given cases illustrative of the different types of Insanity as found respectively in the male and in the female Adolescent I shall now point out that there are several features common to both sexes. Thus maniacal states predominate over melancholic, intermissions and relapses are frequent, Hallucinations both auditory and visual are not rare, and delusions mostly subjective and of the form of persecution are met with, and lastly in both sexes there is a high percentage of Recoveries. This latter fact is well shown if we compare the Recovery rate for my thousands and patients generally with

that of the 90 Adolescents in particular, and the following figures indicate in a graphic manner the great difference.

Recovery out of 1000 cases 379 or 37.9 per cent  
 " " 90 " 54 or 60 " "

Thus the period of Adolescence though it is a time of grave danger to the developing and unstable cortex, yet from the above figures it is evident that compared with other forms of Insanity that of Adolescence has a much more favourable chance of Recovery. In giving our opinion however as to the ultimate result in any case, four factors will materially guide us, for although as has already been shown the Recovery rate is high, yet in individuals, our prognosis will be much influenced by the age and sex of the patient, by the type of the disease, and at a later period by the length of time that has elapsed since the date of admission.

Age From the following tables it will be seen that, while it is in the after years of development, that liability to mental breakdown is most common, that it is in the earlier years that the largest percentage of cures takes place: for while more than half of the recoveries among the females are met with before the age of 19, and nearly half among the males before the age of 20, of the chronics 12 out of 14 of the one sex, and 14 out of 16 of the other, occur at a later age.

Of males:-

		Recovered	Chronic
Between 16 and 17 -	2	10	2
" 17 " 18 -	3		
" 18 " 19 -	1		
" 19 " 20 -	4		
" 20 " 21 -	3	12	14
" 21 " 22 -	3		
" 22 " 23 -	3		
" 23 " 24 -	2		
" 24 " 25 -	1		
	22		16

Of Females:—

		Recovered	Chronic	
Between 15- and 16 -	5	18	1	
" 16 " 17 -	3		2	
" 17 " 18 -	7			
" 18 " 19 -	3		1	
" 19 " 20 -	4	14	2	
" 20 " 21 -	3		4	
" 21 " 22 -	5		12	
" 22 " 23 -	1			4
" 23 " 24 -				2
" 24 " 25 -	1			
		32	14	

Sex As already mentioned the percentage of recovery for adolescents, as compared with all cases in my statistics, was as 60 to 37.9 - but this percentage is not made up in equal proportions by the two sexes, for while of the males only 53.6% were deemed as cured, as many as 65.7% of the females were discharged recovered, so that it is evident that in the case of the former our prognosis must be

more guarded than in the case of the latter.

Type of Mental Disease I have already shown, that mania as a symptom of mental disease in Adolescence, is much more common than Melancholia, and just as states of exaltation are more frequently met with than states of depression, so of these the former evinces a greater tendency to cure than the latter, for out of 59 cases of mania 73 per cent ended in recovery, while out of 31 of Melancholia, only 50 per cent.

Duration of Attack The last factor which has to be taken into consideration, when we estimate our prognosis, cannot be said to be of equal value with the others, for it is not until a much later date in the duration of the disease, that it comes into operation. But it will be seen from the following dates at which recovery took place, that after the first few months

our prognosis can to a large extent be guided by this element - for of the male cases more than a half recovered before the 6<sup>th</sup> month, and of the females the same fraction before the seventh, while of the remainder of each sex all with 4 exceptions were discharged within a year of residence.

	males	females	
Under two months -	1		16
From 2 to 3 months -	2	3	
" 3 to 4 "	5	2	
" 4 to 5 "	2	2	
" 5 to 6 "	2	3	
" 6 to 7 "	5	6	16
" 7 to 8 "	1	3	
" 8 to 9 "		8	
" 9 to 10 "	1		
" 10 to 11 "	2	2	
" 11 to 12 "		1	10
" 12 to 13 "			
" 13 to 14 "		1	
" 17 to 18 "		1	
" 27 to 28 "	1		

In conclusion and to sum up the history of the 90 cases of Adolescent Insanity, which I have considered in the foregoing pages I find that 54 recovered, 6 died, and that 30 still remain under Asylum treatment.

Of the 54 who recovered, 15 have already relapsed, but of these 10 have again been discharged as cured, while of the remaining 5, one is still deemed hopeful but the other 4 help to swell the chronic ranks.

Of the 30 who remain I may still make a recovery, and of the others 9 have acquired a more permanent form of Insanity - Delusional or recurrent, and 13 have drifted into a state of vegetative or more or less dementia.