T H E S I S

- on the -

PSYCHOSES COMPLICATING MENTAL DEFICIENCY.

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THE PSYCHOSES COMPLICATING MENTAL DEFICIENCY.

In the course of ten years spent in Public Mental Hospital work I have been much struck by the number of patients in whom an acute psychosis of short duration and apparently of no great severity has been followed by what I at first took to be a disproportionately grave dementia.

Continuous contact with these cases led me to believe that this apparent dementia was in reality a condition of Mental Deficiency, either unaltered or rendered more serious by the superimposed psychosis.

The investigation suggested by this observation, and on which this thesis is based is:-

(1) An attempt to determine whether this clinical observation is borne out by the facts when the cases concerned are closely examined and analysed.

(2) A comparative study of the etiology and pathology of mental deficiency and of the psychoses.

(3) A study of the incidence of the various psychoses on the mentally defective.

(4) A comparison of the course and prognosis of the various psychoses in the defective and non-defective patients.

(5) A study of the proportionate incidence of the psychoses on the defective as compared to the non-defective population.

In my investigations I studied two groups of cases.

The first group consisted of the male patients admitted to Salop Mental Hospital over a period of four years, suffering on admission from various psychoses, but proving on enquiry to have been mentally defective before the onset of the psychoses.

The second group were certified Mental Defectives at the L.C.C. Colony for Mental Defectives at Darenth, who developed psychoses as a complication of the already recognised deficiency.

The study of the etiology of Mental Deficiency is complicated by the circumstance that the factor generally agreed to be the most potent, and which is readily but vaguely demonstrable in over 50% of cases, defies precise scientific investigation.

I refer to neuropathic inheritance.

To begin with, the very term is one which different observers interpret in different ways. Henderson and Gillespie, 'Textbook of Psychiatry', Edinburgh 1930, draw attention to this in pp. 28, 29 and 30, and partly for this reason are very guarded in their attitude to its aetiological significance, though they do state -- p. 26 -- that "Heredity is of considerable importance". On the same page they point out that the human race, with its small numbers in each generation and the long intervals between generations, is unsuited to the study of heredity. To these factors might have been added the prevalence of miscarriages and perhaps even the use of contraceptives.

Another impediment to the study of the heredity of mental abnormalities is the general unwillingness of relatives to give information reflecting adversely on the intellectual and social adequacy of the family.

Owing to these factors and probably also to the variation of the intensity of effort of various observers, the percentage of cases in which neuropathic inheritance is held proven by different authors varies greatly.

Tredgold, 'Mental Deficiency', London 1929 pp. 34 and 35, states that in a series of 200 cases of amentia "Over 80% were the descendants of a pronounced neuropathic stock. In 64.5% the ancestral condition took the form of amentia, insanity or epilepsy, while in 18% there was a pronounced family tendency to paralysis, cerebral haemorrhage or to the various neuroses or psychoses". He also quotes a number of other observers, whose ascertainment of neuropathic heredity in amentia varies from 24% to 75%, the average being 53.5%.

Shrubsall and Williams, 'Mental Deficiency Practice', London, 1932, pp. 28 et seq., state that in their opinion neuropathic inheritance is the most common cause of primary amentia. They do not support their opinion by statistics.

A review of recent literature on this subject in The Journal of Heredity, 1930, Vol. 21, p. 421, gives percentages of neuropathic heredity varying from 25% to 75%, and there emerges the interesting point that in two groups of offspring of defectives studied, none gave an I.Q, greater than normal. In one of the groups, which was followed to from Five to Ten years of age, and tested repeatedly, 60% were subnormal mentally.

In every Mental Hospital one finds relatives of almost every degree possible in three generations, and minor -- and sometimes major -- degrees of mental abnormality are to be observed in considerable number amongst the relatives of the patients on visiting days.

Obvious mental deficiency, excessive emotional reaction, a suspicious paranoid outlook, goitres -- some obviously exophthalmic, and tics are items of frequent experience in the Visiting Room, and the large proportion of relatives who have to tell of unhappy relationships suggests that social inadequacy is a further symptom present in many of these families.

Statistical evidence and clinical experience then lead one to believe that neuropathic inheritance is a frequent antecedent of mental deficiency, but offer no suggestion as to why the ancestors became neuropathic, and why cases of mental deficiency are found apparently of spontaneous origin.

Research on germ impairment by Stockard, American Journal of Medical Sciences, April 1924, consisting principally of the administration of alcohol to male guinea pigs from which he then bred, proved that the presence of toxins in the blood of the parent may produce such a degree of germ impairment as to result in sub-normal offspring.

Tredgold, 'Mental Deficiency', p. 26, formulates the theory that primary amentia is due to an impairment of the developmental capacity of the neuronic determinant of the germ cell. He supports this theory by the work of Stockard, and by his own clinical experience and that of other workers in the same field.

He states that neuropathic inheritance, alcoholism, tuberculosis, syphilis, consanguinity of parents and abnormalities of age of parents are the most frequent causes of this germ impairment.

This offers a highly probable explanation of the aetiology of primary amentia.

Secondary amentia is an even more perplexing condition to consider from the aetiological point of view.

It is a condition of irregular or arrested mental development due to factors acting on the individual after conception. These factors are the same as cause primary amentia, with the addition of disease and injuries affecting the pregnant mother or the child before, during and after birth and before the 4th year.

Tredgold, 'Mental Deficiency', pp. 32 and 33 points out the difficulty which exists in diffentiating primary and secondary amentia, stating "Although a history of some adverse factor of the environment incident on the embryo or infant is obtained in a considerable proportion of cases of amentia, nevertheless in the majority of these neuropathic inheritance is also present. In such cases germ impairment must be held to play the chief role . . . . . ".

Mental and physical abnormalities of the mother during pregnancy and labour, primogeniture, and traumatic or toxic influences acting on the child are all, in Tredgold's opinion of comparatively slight importance acting alone, but of great importance in precipitating or aggravating amentia where there has been germ impairment.

Shrubsall and Williams 'Mental Deficiency' practise pp. 32 - 36 also ascribe considerably more importance to these conditions as aggravating than as prime factors.

To sum up, then, the consensus of opinion is that Mental Deficiency is a condition due to the vitiation of one or both germ cells previous to conception. This vitiation is due principally to neuropathic inheritance, and after that to alcoholism, tuberculosis, syphilis,

consanguinity of parents and abnormalities of age of parents. Of these, consanguinity is probably only operative where the stock is unsound. Various other factors, traumatic and toxic, may cause amentia by acting on the individual after conception, but much more frequently their action is to aggravate a predestined state of arrest of mental development.

Turning to the psychoses,, one finds a similar agreement as to the aetiological importance of neuropathic heredity.

Buckley, 'The Basis of Psychiatry', Philadelphia 1920, Chapters V and VI, states his belief that almost all mental disease is caused by an inherited predisposition, sometimes acting alone and at others associated with some precipitating cause such as toxaemia, disorders of the internal secreting glands, chronic disease, pregnancy, and mental stress, sudden or prolonged.

Henderson and Gillespie, 'Textbook of Psychiatry' Chapter III, show a strong belief in the importance of heredity, but hesitate to make any decisive statement. While they admit that both clinical experience and the statistical study of various mental diseases show that neuropathic heredity is a factor frequently encountered, they quote (p. 30) an investigation by Bleuler which shows that in some cases at least psychotic stock can rid itself of its taint and regain normality.

They believe the heredity of mental disease to be in the main dissimilar.

Of other causes, they ascribe considerable importance to acquired syphilis, not only for its direct effect, but also for the effect it produces through arterial selerosis.

They are less confident as to the effects of congenital

syphilis.

Alcohol they believe to be an infrequent sole cause, but to be a frequent precipitating factor and early complication.

Chemical poisons, habit-forming drugs, auto-intoxication and bacterial toxins they believe to be very infrequent causes of certifiable mental disorder, and in fact, they attach little importance to physical conditions unaided.

They are of opinion that mental factors are of the greatest importance in the aetiology of the psychoses, and believe that the failure of the individual to answer successfully to the demands of his environment is a frequent cause of mental disease, and that many cases are the inevitable breakdown of faulty reaction types when faced with difficulties beyond their powers, whether these be business or social, prolonged or sudden.

The faulty reaction-type may be the result of inherited handicap or of faulty training and habit. (p.100)

White, 'Outlines of Psychiatry', Washington 1921, Chapter V, states that the commonest predisposing causes of mental disease are inherited predisposition, alcohol and syphilis. The first of these he believes to be present in from 60 to 70% of cases. Foremost amongst exciting causes he puts toxins, both exogenous and endogenous, and mental stress.

J. Shaw Bolton 'The Brain in Health and Disease' London 1914, p. 225, states that toxic influences more readily, cause mental disease in cases where there is inherent lack of durability of the cortical neurones than in individuals with normal brains.

Jagoe Shaw, Journal of Mental Science, 1930 LXXVI p. 505, writes strongly in favour of inbreeding as a

cause of Schizophrenia, instancing the Parsees, in whom the marriage of close relations is the rule, and in whom schizophrenia is very prevalent. This intermarriage has been taking place for centuries, the object being to avoid the division of family possessions as far as possible.

The view commonly held on this subject is that inbreeding is not a cause of mental abnormality where stock is healthy but that it serves to intensify any mental instability already present.

Dr. Jagoe Shaw argues that it is impossible to prove a 'taint' in the original Persian settlers in India, the ancestors of the entire Parsee community. It is equally impossible to disprove it.

According to Chambers Encyclopedia these people were the remnants of a minority of a defeated race. The majority made peace with their conquerors, but this minority refused to do so, and after a prolonged period of hardship and persecution escaped to India. It is highly probable that the best of the male stock had been killed off in the incessant guerilla warfare, and that only the poorer portion, quicker to run than to fight, survived to emigrate. The very fact of the mass emigration suggests that the bolder and more adequate stock was in the minority. I think that this fragment of history is sufficient to justify a very guarded attitude to this argument in favour of inbreeding as a cause of Schizophrenia.

It seems that in the psychoses as in mental deficiency the most frequent cause is neuropathic heredity, and that while other factors such as syphilis, alcohol, toxins and mental stress can cause mental disease, unaided,

they are much more potent and more commonly effective in the presence of inherited neuronic instability.

The pathology of mental deficiency is in its essentials fairly clear and well established, authorities being much more definite on this than on aetiology.

Macroscopic:-

Shrubsall and Williams in 'Mental Deficiency' Practise pp. 21 - 23, and J. Shaw Bolton in 'The Brain in Health and Disease' p. 137, describe the cerebrum of the primary ament as being in many cases of unusual simplicity of convolutional pattern, sometimes associated with a reduction in volume and weight. These changes are usually most obvious in the prefrontal lobes, the inferior portion of the temporal lobes, and the supra-angular and supra-marginal portions parietal lobe.

Tredgold (Mental Deficiency) pp. 76 - 77, admits the frequency of these changes, but points out that they are present in only a proportion of mental defectives, and that they have also been found in the brains of persons apparently normal intellectually.

Microscopic:-

Here there is closer agreement.

J. Shaw Bolton 'Brain in Health and Disease' pp. 83 - 84, divides all mental abnormalities into amentia and dementia. He includes in amentia the condition we are now considering as well as a number of mental states more commonly considered as psychoses.

In amentia he finds that there is well-marked sub-evolution of the cerebral cortex, most pronounced in the pyramidal layer, but also evident in the other cellular layers, its severity being in direct proportion to the degree of amentia. The sub-evolution is indicated

by deficiency in number, abnormality of structure and irregularity of position of the constituent cells.

Tredgold 'Mental Deficiency', pp. 78 et seq., describes the same cellular abnormalities, and also points out that association fibres are fewer than in normal brains, while neuroglia is increased.

Shrubsall and Williams 'Mental Deficiency Practise' pp. 21 - 23, describe the same condition.

R. J. A. Berry, B.M.J. 1931 pp. 837 - 839 states that "Mental deficiency does not result so much from a dissolution of brain cells as from their inherent inability to develop, many of them remaining in the neuroblastic condition".

It seems to be well established that in Primary Amentia the essential lesion is a paucity of cortical neurones, combined with an imperfect development and irregular arrangement of those present.

As the imperfect development consists in part of a subnormal supply of cell processes (Tredgold 'Mental Deficiency' p. 79) it follows that the association fibres are few both absolutely and in proportion to the nerve cells present.

These abnormalities are most marked in the cell layers most recently developed, the supra-granular layers, and are common to all areas of the cerebrum, though (Tredgold, 'Mental Deficiency' p. 80) they are most marked in the prefrontal and parietal cortex, where (J. Shaw Bolton, 'The Brain in Health and Disease' p. 52) are found the association and projection areas, both motor and sensory.

The pathological picture of secondary amentia is at first more confusing, owing to the number of abnormal

macroscopic conditions found in these brains.

Tredgold 'Mental Deficiency' p. 88, describe cases in which gross lesions resulting from disease and injury of the cerebrum and meninges are found associated with secondary amentia, but points out on page 77 that these, as well as developmental abnormalities, have been found in persons of normal mentality. (He asserts (pp. 84 et seq.) that the essential change in Secondary amentia is identical with that in the primary form. As all the macroscopic conditions described probably act by hindering the development of the cortical neurones, either by interference with their nutrition or mechanically, it seems likely that his opinion that the important pathological condition in secondary amentia is a subnormal development of the cerebral cortex is correct.

The pathology of the psychoses is on the whole obscure. Leaving aside the mental disorders associated with vascular changes and with direct infection such as syphilis, the majority of the psychoses show little or no macroscopic or microscopic changes in the brain, and certainly none sufficiently characteristic and constant as to constitute a definite lesion which can be associated with a clinical picture.

An exception, however, is Schizophrenia, which shows definite pathological changes of fairly constant character, the existence of which is admitted by many observers, though opinions as to their origin vary greatly.

J. Shaw Bolton 'The Brain in Health and Disease' pp. 341 et seq. discusses under the name of premature dementia those cases of schizophrenia occurring between puberty and middle age, and states that the pathological condition is one of primary neuronic degeneration, the

pyramidal layer of the cerebral cortex being the earliest and mostseverely affected.

Stoddart, 'Mind and its Disorders' London, 1921, pp. 341 et seq., describes in Dementia Praecox an excess of neuroglia and the presence of immature nerve cells in the cerebral cortex.

Buckley 'Basis of Psychiatry' p. 308, states that Alzheimer and Southard have found degenerative changes in the cerebral cortex of schizophrenics, and that Ross has demonstrated an excessive excretion of sulphur in this disease, which excess is believed to result from the destruction of nervous tissue.

Mott, Journal of Mental Science, 1921 p. has described changes similar to those noted by Alzheimer in the cerebral cortex, and also, associated with these, regressive changes in the ductless glands.

J. Shaw Bolton 'The Brain in Health and Disease,' Chapter VI, describes a loss of cortical cells with degenerative changes in many of those remaining as occurring in dementia, quoting in particular one case, a man of 44 years who died in dementia resulting from mental disease of two years duration and in whose brain there was found a diminution in depth of the pyramidal layer of the cerebral cortex varying from 6% to 24% in different areas.

In total, while there is no complete picture of the pathological changes associated with pure psychoses, with the exception of Schizophrenia, such definite pathological findings as these are lead to the belief that the essential change is to be found in the cells of the cerebral cortex, particularly in the pyramidal layer. The frequent occurrence of abnormalities of the

ductless glands, together with the signs of alteration of their function found clinically, suggest that their health is intimately associated with that of the mind, but the significance of these changes and the nature of the association is not yet fully understood.

A comparison of the etiology of Amentia and of the psychoses shows a striking similarity. The predominant factor in both cases is neuropathic heredity, and next to it come chronic infections, such as tuberculosis and syphilis, and alcoholism. These in amentia act by vitiating the germ plasm and in the psychoses by direct action on the cerebral cells, or by mechanical or nutritional interference. They can cause mental disease unaided, but are more effective in the presence of some degree of inherited neuropathy.

The pathology of the two conditions also suggests a close relationship. In both the essential change is a subnormality of the cerebral cortex. In amentia this is due to the inability of the cortical cells to reach functional maturity, and in the psychoses to their inability to withstand deleterious influences, or to a tendency to early degeneration for no obvious reason.

J. Shaw Bolton 'The Brain in Health and Disease' Chapter I presents amentia -- which for him includes but is of wider scope than the usual conception of the word -- as occurring in brains where many of the cerebral cortical neurones have failed to reach maturity and dementia -- which for him includes most of the psychoses -- as occurring in brains where the cortex did reach maturity, but degenerated more or less prematurely because of an inherent lack of durability. I am of opinion that in the partially developed cerebral cortex the same inherent

lack of durability is very likely to occur, and that for this reason one should expect a higher incidence of psychoses in the mentally defective than in the normal population.

Types of Defectives affected and General Consideration Of the Psychoses.

There is little definite to be said about the type of defective in whom the psychoses develop.

An analysis of the Mental ages of my cases gives no guidance. There is no similarity between the two groups nor is there a steady rise or fall as age increases, and in all probability mental age has no aetiological significance. (Table IV and Graph I).

There was one fact which forced itself on consideration in the Darenth Group, where the patients' pre-psychotic days had been spent in the same environment as their psychotic, and where a continuous history by the same observers was available. The majority -- 61% -- of the cases which developed psychoses were patients who had been capable of useful employment, who had been social successes in their limited sphere, and who had possessed personalities sufficiently striking to stand out from the ruck. The dull lad, capable only of mechanical work under supervision, inconspicuous in games and entertainments, and just able to hold his own in ward life appeared to go on and on in his dull but safe routine, while case after case more capable and attractive fell a victim to schizophrenia and gradually descended from the aristocracy of skilled labour to the limbo of unemployability. e.g. Darenth cases 9, 11, 14, 15, 35. I think it may justly be said that the presence of a more than average amount of energy and initiative in an ament is indicative of a poor prognosis.

The ages of onset of the complicating psychoses were interesting.

Instead of the steady rise of incidence as age

increases up to middle age, as found in the ordinary psychotics (Table VI) there was a surprisingly large proportion of cases between 15 - 19 years, a fall at 20 - 24 years, and then again a rise. (Table V and Graph II).

Probably the reason of the 20 - 24 years fall is that the economic and social stresses met by the average man at these ages are absent in the family or Colony sheltered defective, and the large incidence at 15 - 19 years is due to the fact that nothing can give shelter against puberty, which is late in appearing in the male defective. (Tredgold, Mental Deficiency, pp. 145 - 146), and that it, the first of the periods of sexual stress encountered by the individual, finds the defective less able to withstand the strain of associated mental changes than is the normal youth.

The types of psychoses affecting the mental defective show a very high proportion of Schizophrenics (Table II) and of these 70%, or 53.6% of the total number are suffering from Simple Schizophrenia (Table III).

Bearing in mind the various points of resemblance already noted in the pathology of the two conditions this is scarcely surprising.

The differential diagnosis is a point of some difficulty, but I have accepted as Schizophrenic only those cases where there is demonstrable a permanent loss of a previously attained mental standard, associated with indifference or apathy and lack of desire for work or for amusement. J. Shaw Bolton 'The Brain in Health and Disease', p. 164 states: "The ament may react abnormally to stimuli but he does not lose the capacity either to feel or to react. The dement, on the other hand, at an early stage loses his capacity to feel,

although stereotyped external indications of emotion may persist for a long time". This loss of emotional reaction is the most constant and striking feature of the Schizophrenics I shall describe.

The prognosis of the Schizophrenics is bad. Of the 61 cases investigated one died in the acute stage of his psychoses, while another was still too recent to permit of prognosis. Of the remaining 59, 43 or 73% had reached complete dementia, and most of the remainder had descended far towards it. Only a very few cases remained capable of useful employment or of coherent conversation.

The type of arrested schizophrenic which is so familiar working in Mental Hospital Wards or grounds is almost entirely absent.

The vast majority of cases is progressive to complete dementia, and arrest at partial dementia, with a residuum of mental power sufficient to permit of employment or of appreciation of amenities is rare.

Next in number come the Manic -- Depressive Psychosis and Epileptic Insanity with 8.5% of cases each (Table II)

The manic-depressive are perhaps least affected of all defectives by their psychoses. The attack is generally brief and the recovery of what mental powers pre-existed complete.

They do not appear to have more frequent attacks that do non-defective patients.

Epileptic Insanity differs in no way from the same disease as seen in the non-defective patient, nor does Paraphrenia, present in 4.7% of my cases.

In investigating the male admissions to Salop Mental Hospital over a period of four years with a view to ascertaining whether any were mentally defective, I began by excluding from consideration all who had proved themselves socially adequate by leading with average success the normal lives of their class, believing that in doing this they had proved themselves outside the scope of my investigation.

Here I would like to emphasise the point that no defective appears to be able to maintain himself as an independent unit. Simple farm work and labouring are well within the compass of many, but none are able to utilise their wages prudently and with foresight.

Such few cases as had apparently lived independent lives proved on closer examination to have been fairly regular recipients of private charity, to have received parish relief, or to have had some friend or relation who planned and insisted on a reasonable budget.

The remainder of the admissions for these four years I investigated mainly by visiting the schools where they had been educated, where the personal memories of school-masters and more frequently class and admission registers proved a fruitful source of information.

In the course of this investigation I visited schools of all sizes, from the tiny one or two roomed building serving the needs of a small rural community to the charge and well-equipped schools in the larger towns such as Shrewsbury and Oswestry, and was impressed by the fact that with the diversity of environment, the differences in equipment, and the large variation in the amount of individual attention provided it was possible to attain a uniform level of education and in

schools of the two extreme types. My professional experience has made me extremely conscious of the inevitability of mental deficiency irrespective of environment and opportunity, but this investigation certainly convinced me of the equal inevitability of intelligence.

Other informants, fewer in number and inferior in reliability, were relatives and relieving officers.

Owing to the system of destroying class registers after ten years, and to the numerous transfers of school staffs which have recently taken place in this county, I was unable to obtain histories of a number of men I believe to have been defectives, but I have included no case in which I was unable to obtain a definite history of retardation, either by the actual personal memory of school teachers or by the records in admission and class registers. Adhering to this standard, I found that a total of 26 cases of psychoses admitted over a period of four years were fundamentally cases of mental deficiency. This total appears paltry, but when it is realised that it amounts to 8.96% of the total male admissions (Table I) and 21% of the male admissions under 45 years, it will be realised that it merits investigation. It was because of the smallness of this group that I sought for material at Darenth also.

The estimation of mental age in the Salop group was a difficult problem.

The Binet-Simon and other accurate tests for the estimation of mental age were not in systematic use in this county at the time, when the majority of my patients were at school. The records of school Medical Officers, which the M.O.H. for Shropshire kindly allowed me to

examine, were vague as to mental conditions, and in such cases of mental defect as were recorded no more definite statement than "Dull and Backward' was used.

My cases were mainly people whose mental condition had not been investigated by any physician until the advent of symptoms of such a nature as to compel certification as persons of unsound mind, and though I made use of the Terman revision of the Binet-Simon tests in many cases I have not thought fit to quote my results, as they refer to the intellectual standard of the patient after the stress of the psychosis, and therefore indicate not the degree of amentia originally present, but amentia plus dementia.

I was therefore driven to assess mental age by the method of subtracting from 14 one year for each standard the boy was below standard VII on leaving school, unless in such cases as school teachers volunteered a definite statement as to mental age. This does not take into account the fact that a backward boy in an ordinary village school has to be promoted beyond his merits for reasons of organisation and of discipline, and therefore I believe that the mental ages I have given to the Salop group are in general somewhat flattering.

Owing to the absence of a recognised intelligence test I have given the history of each of the Salop cases in full, as in each it is necessary to prove that the intellectual and social inadequacy of the patient was present before the onset of the psychosis.

The Darenth group was selected by examining all the male cases whom the Medical Superintendent of the Training Colony, his Medical Officers, or the Head Male Nurses considered to have shown any sign of psychosis.

Here I accepted as psychotic only such cases as a case-sheet history, or the personal knowledge of my informant gave definite evidence of an alteration in mental state sufficient to reduce considerably the efficiency of the individual. This led to the rejection of a very large group of cases which were probably simple schizophrenia, but in which I could obtain no definite proof of a previous higher mental standard.

On the other hand, certification and removal to Mental Hospital is rarely resorted to, only two cases having been certified in three years, so that little had been taken from my material in this way.

Even with this distinctly critical survey, I found a total of 56 obviously psychotic cases in a population of 878 — 6.1%, and had more complete histories been available I have no doubt that the number would have been greatly increased.

The mental ages in this group were ascertained by a system based on the Terman Revision of the Binet Simon tests, supplemented by the Porteous maze and similar tests.

I have not considered it necessary to give all 56 cases in detail, but have given particulars of 10 representative cases, and tables demonstrating the essential points of the whole group.

Cases of Mental Deficiency Complicated by Psychoses, Salop Mental Hospital 1927 - 30.

(1) G.A.K. was 3 years retarded at school and on leaving aged 14 was only in Standard IV. He then worked in a dairy, delivering milk and doing odd jobs. He was well conducted and conscientious and was perfectly competent at this. He kept this post beyond the age at which boys usually do errand work and then held a variety of jobs in shops innone of which he stayed for more than a few weeks, being unable to learn new methods and routine. He was then employed in a railway parcels office and managed to hold on to this post for some years, his docility and willingness to obey orders compensating for his marked deficiencies as a clerk. Unfortunately gradually increasing responsibilities at work weighed heavily on him, and he gradually broke down, developing a paranoid schizophrenia with hallucinations of hearing. Family history healthy. He was admitted in January 1927 suffering from Schizophrenia, age at onset 25. He was then silly and irresponsible, indifferent to reality, with vague delusions of persecution, auditory hallucinations of an annoying nature, and a history of outburst of impulsive violence. He remained unchanged until November 1928, when he became more elated, betrayed absurd delusions of persecution and of grandeur, and showed rapidly advancing dementia. His deterioration has continued, and it is now impossible to distract his attention from his delusional life. He constantly carries on loud and incoherent conversations with hallucinatory voices, makes use of neologisms, is manneristic and occasionally exhibited stereotypy of movement. He is progressing to complete dementia.

(2) Ll. J. He was three years retarded at school and was slow and clumsy physically. History on leaving school is vague until after the war, in which he did not serve. Since about 1920 he had been living with a brother who either supported or exploited him. It is certain that he worked fairly constantly in a brickyard, that his brother drew his wages and that so far as the patient knows, he only received 3d. a day. After work he was not allowed to go out, but was confined to the house. He seems to have found this life quite satisfactory.

No member of this man's family has been certified, but they are described by the relieving officer of the district as a family of tramps and prostitutes.

An attack of mania in which violence was a prominent symptom led to his certification at the age of 39. On admission he was garrulous, circumstantial in speech with occasional flight of ideas, and extravagantly self-satisfied. After about five months the maniacal symptoms disappeared, and he appeared in his true colours as a high-grade mental defective. He shows no material alteration since then and has had no further attack of mania. His feeble-mindedness does not increase.

(3) G.E.W. Was kept at school until 16 years old, when his intellectual standard was that of a boy of 12. His father -- a clergyman -- then attempted to educate him at home but found it impossible to get him to assimilate any new fact. He was then started in several different callings -- farming, shop-assistantcy and piano-tuning are a selection -- but was always returned

home as being unable to learn his duties. His father was normal, but his mother was decidedly eccentric, a heavy drinker, and spending much of her time in the local public-house. He broke down and was certified at the age of 25, the only suggested precipitating factor being that he had been sent to London to learn piano-tuning. He was suffering from Schizophrenia when admitted. He was capable of coherent speech but seldom spoke, showed no evidence of hallucinations or delusions, and was alternatley semi-stuperose and intensely active in a purposeless fashion. His habits were clean, but he was untidy and unemployable. He remained unchanged for 8 months, and then steadily degenerated, until on his discharge by transfer to another Hospital after 3 years he was hallucinated, completely incoherent in speech, unclean in habits, and in an advanced stage of dementia.

(4) O.W. Was at least two years retarded at school and was too apathetic and uninterested to give any trouble. On leaving school he was employed on various farms but never kept his positions long as he would only work under constant stimulus and supervision, and when admitted was only receiving about half the wages a boy of 18 should get. Two of his uncles were patients in Herefordshire Mental Hospital.

On admission aged 18 he was suffering from Schizophrenia, precipitating cause unknown. He had immediately before admission been very talkative, stating that he had met the Devil in the flesh, and had fought with him. When he arrived here he was dull and uninterested, lying

quietly in bed except for one brief and purposeless outburst of activity. He then improved, but remained dull and asocial until his discharge to the care of relatives three months after admission. His friends stated that he had degenerated slightly.

(5) W.H.G.J. Left school aged Six because of epilepsy and when admitted here was of mental age Seven. (Terman Revision Binet Simon Tests). Two cousins are Mental Hospital patients. He was reported to the Board of Control as a case of Imbecility with Epilepsy, until at the age of 16 he developed Schizophrenia.

He became constantly confused, showed mannerisms, particularly at table, became untidy and unclean in marked contrast to a previous tendency to foppishness, lost his little accomplishments of reciting and rather crude drawing, and became unemployable. He is rapidly going downhill and will soon be completely demented. The frequency and severity of fits is unaltered, but the period required for recuperation is prolonged.

(6) J.F. Was two years retarded in school in most subjects, and much more in others. He never learned to add. He left school aged 14 and went to work at a coal-pit. The other boys there found that he was stupid and slow in learning his work and very credulous and for a year amused themselves by telling him ghost stories and by playing practical jokes on him, and there is no doubt that this constant strain was the precipitating factor of his psychosis. His mother was a patient in this Hospital in 1906, suffering from Mania.

On admission he was suffering from Schizophrenia. He was miserable and apprehensive, full of self-pity, biting and scratching himself, and at times showing perseveration and stereotypy. In four months he began to improve and in 8 months was discharged to the care of friends, but his former school-master informs me that James is growing more and more stupid and is now the butt of the village.

(7) P.J.R. Was two years retarded at school. After leaving school he did odd jobs for a year or two and was then apprenticed to a carpenter. He was a good workman, clever with his hands, but never got on well for two reasons. In the first place, he always had to have everything pointed out to him, and could never see what needed doing for himself and secondly he became a very heavy drinker. Alcohol appears to have been the precipitating factor of his break-down.

His sister is under treatment here. She was suffering from melancholia on admission, but has recovered and is now an imbecile.

On admission at the age of 29 he was suffering from Mania. He was elated, showed flight of ideas principally centred round religious subjects, and grimaced and gesticulated constantly.

This condition persisted with brief and incomplete remissions for 12 months, when he began to improve. He was discharged in 16 months.

(8) H.H. Was two years retarded at school. On leaving school he was found various jobs, but always lost them very soon. He committed a silly theft, and ran away to escape the consequences. The next six years was spent in tramping, in brief spells of casual labour and in prison, three convictions for stupid and unprofitable crimes having been recorded against him. Occasionally he came home but never worked there, and never stayed for long.

His brother (age 24) and his sister are both Schizophrenics in this Hospital. His parents are both exceptionally assertive in speech, but seem fairly able.

On admission by transfer from Cotford Mental Hospital aged 19, he was suffering from Schizophrenia. He gave a confused and contradictory account of his life before admission and was indifferent to reality, taking no interest in his surroundings or neighbours. In about a month he had developed unmistakeable perseveration and stereotypy, and he has steadily deteriorated to almost complete dementia.

(9) A.E.W. Was Seven years retarded at school. On leaving school he worked for his father, a prosperous farmer, and did not compete in the labour market. He is stated always to have been "nervous, shy and retiring". He had a previous attack of Schizophrenia at age 17. No precipitating cause is known for either attack. Family history healthy.

On admission, age 22 he was suffering from Schizophrenia. He was dull and stuperose, incapable of conversation,

and unobservant of his surroundings. In a few weeks he began to improve, took more interest in his surroundings, but began to complain vaguely of persecution by other patients. He never made any friends, and always returned evasive answers to questions about his feelings and health. After Seven months he was discharged by order of the petitioner.

(10) G.A. Was four years retarded at school. After leaving school he worked as a farm-boy for some years, and owing possibly to the shortage of men during the war kept his employment. He then joined the Army and served almost three years. A male nurse who was in the same unit for a short time says that G.A. was almost constantly under punishment for minor offences. He was never sent overseas, and was discharged before the Armistice, reason unknown.

After discharge he worked a little, poached a little, and claimed parish relief frequently. He drank to excess whenever he had money.

He is the 9th illegitimate child of his mother, and one sister is under care as a moral imbecile.

On admission, aged 29, he was suffering from Schizophrenia, probably precipitated by excessive drinking. He had delusions of persecution by unknown persons who used to abuse him all night and to poison his beer. He also complained of being full of live animals which moved about and made him feel sick. When making these complaints he seemed rather pleased than otherwise. He lost his delusions and hallucinations in about a month, but for over a year remained very touchy

and easily upset, and was given to attitudinising and grimacing.

He is now equable in temperament for long periods, but has occasional periods of lethargy, followed by brief attacks of violent excitement. His feeble-mindedness does not increase.

(11) F.D. Four years retarded at school. There is a long gap in his history, but for about five years prior to certification he had been a quiet, well-behaved imbecile inmate of a Workhouse.

There is no family history available and he has apparently no relatives. The precipitating cause of his psychosis is unknown.

On admission aged 42, he was suffering from Paraphrenia Systematica. He was persecuted by some unknown person who constantly played an organ to annoy him, and to ruin his health by depriving him of sleep. The only change since admission is that the organ is played less constantly, but he is convinced that there is a conspiracy against him and as a result is solitary in habits and very guarded in speech. His feeble-mindedness does not increase.

(12) J.W.M. Two years retarded at school. On leaving school he worked on his father's farm and when his father retired, did nothing. Family history, healthy.

On admission, aged 22, he was suffering from Schizophrenia of at least two years duration. He was without external interests, was very introspective, much interested in his own physiological processes, and

required firm management as he had reduced his meals to one in 48 hours and hoped to reduce them still further. He was solitary and suspicious, untidy and at times unclean, and he deteriorated steadily. After 8 months he died of Phthisis Pulmonalis.

(13) C.J.C. Was two years retarded at school. At age 14 he started work under his father, gardening. He did well enough under his father's supervision and management, but when found an independent post some months before admission here he worried over his work and finally broke down. He was admitted age 25, suffering from Schizophrenia. He had delusions of persecution and ideas of references and stated that the silence on Armistice Day meant that he was to be hung. In consequence he was very apprehensive, and made attacks on the staff to anticipate expected attacks from them. At times he verbigerated, and for a period his habits were faulty. He improved after a few months and was discharged at the end of six months, with no increase of his feeble-mindedness.

(14) J.G. He was four years retarded at school, which he left at age 14. He then worked in a colliery, and earned ordinary wages, but was socially inadequate, had no friends of his own age, and was the butt of the village. He was an illegitimate child and no other family history is known. He was admitted here, age 21, suffering from Schizophrenia. He was suspicious suffered from delusions of bodily change and of impending harm, and was negativistic. His speech was a word-salad

containing many neologisms. He died of broncho-pneumonia after six weeks.

(15) R.P. He was more than two years retarded at school and for years no attempt was made to find employment for him. He was the youngest of several brothers and his mother could afford to keep him idle because he was "delicate". He was in excellent physical health, and the delicacy was mental.

Several of his father's family were "queer", and one uncle died under certificate in this Hospital.

He was admitted age 21, suffering from Schizophrenia, the precipitating cause being his first spell of work as a labourer. He was simple and childish, generally placid and contented, but was at times worried by hallucinations of hearing. Later he became much less alert, showed marked reduction of external interests, and began to indulge in stereotyped movements. He was discharged to care of relatives in 18 months, but in ten months was readmitted, more vague and foolish than before.

(16) H.K. Was at least four years retarded at school. On leaving school he worked intermittently as a labourer, mainly in company with his father, and was to a large degree self-supporting, though he lived at home and his parents took possession of and administered his wages for him. He developed epilepsy at 14 years. The family history is healthy. No precipitating cause is known.

He was admitted, age 27, suffering from Epileptic

Insanity. He was confused, quite disorientated, stuperose at times, and had a number of petit mal but no major fits. With the advent of major fits he got rid of his confusion and was then found to be intensely introspective, to worry about every trifling bodily sensation, and to be suspicious and evasive in answering questions. In this condition he was discharged to the care of relatives after 8 months.

(17) D.D. Was two years retarded at School. At age 14 he found employment as dishwasher and odd job man at a small local hotel. He stayed there until the onset of his psychosis at age 19, when he was receiving only 10/- a week and his food. His family history is healthy, and the cause of his psychosis is unknown.

On admission, aged 19, he was suffering from Melancholia. He was well orientated, was depressed and full of self-pity, and showed considerable retardation of thought and speech. Prior to admission he had made an almost successful attempt at suicide by cut-throat. In about a month he began to improve and in two months he was cheerful, had lost his retardation, was working well, and was perfectly contented with his life here. He was, however, very simple, and childish. He was discharged at the end of ten months to the care of relatives, who considered his mental condition quite normal for him.

(18) D.J.M. Was three years retarded at school. Worked as a farm hand after leaving school, but could never keep a post for more than a few months. Between jobs he

used to go on tramp, returning destitute and in rags. He joined the Army in 1916, and went on active service, but within a few months was in Hospital being treated for some mental disorder. Since then he has been continuously in Mental Hospitals except for a month when he was discharged by his father's order. He was recertified and admitted here suffering from Schizophrenia. He is slow and simple in speech, easily becomes confused if questioned about his past life, and is, at intervals worried by auditory hallucinations. He is an excellent worker, particularly with animals, but his usefulness is impaired by occasional outbursts of temper.

His brother is under certificates here, also suffering from schizophrenia.

(19) L.B. He was two years retarded at school, and on leaving it escaped from parental control and lived a nomadic existence, sleeping in barns and in the woods, doing an occasional days work, stealing, begging and poaching. He occasionally got a little money from his relatives. His family are pariahs in their district, as they are incurably quarrelsome. An aunt, an uncle, and a brother, have all been treated here. His condition seemed to have been stationary for some time, but he was certified because he had made threats of violence to a girl, with whom he had apparently fallen in love. He was admitted, aged 38, suffering from Schizophrenia. He was seclusive and solitary, resentful of questions and very vague in his replies, and most unclean and untidy. After a few weeks he made a temporary improvement and worked well for a month or two, but relapsed. He remains here, solitary and taciturn, working well for months on end, and then having periods of complete apathy and mutism. His condition is stationary.

(20) E.H.J. Seven or eight years retarded at school. Could not be taught to read. On leaving school he accompanied his parents, who were fruit hawkers, on their rounds, did odd jobs for them, and drew trade by his antics.

Both parents were syphilitic, and the patients blood serum was positive to the Wassemann test, his C.S.F. being negative. No precipitating factor was known. He was certified because he passed into a semi-stuperose condition which alarmed his parents.

On admission aged 20, he was suffering from Schizophrenia. He was confused, was completely disorientated, could understand what was said to him, but could not reply, and had marked echolalia. His habits were faulty, and he was given to aimless wandering. After three months he began to improve, incontinence disappeared, he became more restful and could converse in a silly childish fashion. He was discharged at the end of five months, with no alteration of the original feeble-mindedness.

(21) G.M. Three years retarded at school, which he left at age 16 years. He then went to work on his father's farm, where he remained with perfect contentment. The father died and the farm became the property of the patient and his brother, but the patient was found to be quite incapable of taking any share in the business affairs of the firm, and continued to work as a labourer.

The family history is very bad, The founder of the family fortunes, about 80 years ago, left two farms, and there has been constant inter-marrying ever since

to keep the farms in the family. A weak streak has thus become intensified, and at least six of the last two generations have been treated here. No precipitating factor for the psychosis is known.

At age 33 patient was admitted suffering from Schizophrenia. He was elated, manneristic, given to fantastic self-decoration, and much pleased by hallucinations of hearing of an amusing character. He was certified because he would not allow gates or doors to be shut on cattle and because he insisted in standing them knee-deep in cold water for prolonged periods in winter. He has never shown any interest whatever in anything but farm work since he came here, and works hard as many hours a day as he is allowed. He has lost none of his curious beliefs as to the care of animals, but does not attempt to put them into practice. He is dementing a little, but very slowly.

(22) C.R.J. Two years retarded at school. His father blamed the school-master for this and took the boy from the National school sending him to a neighbouring Grammar School. The boy was keen on doing well there, and used to worry himself ill attempting to cope with his work, but was quite unsuccessful and had to be taken away. He was then started in a variety of posts, mainly clerical, but failed in all of them, and eventually his father started him as a chicken-farmer in a very small way. This suited the lad and was a great success until the fowls had an epidemic. The worry of this proved the breaking point, and the patient became schizophrenic. Family history, healthy.

Aged 21, he was dull and stuperose, given to

stereotyped movements, and uninterested in his surroundings and neighbours. He made an early improvement, answered questions readily, worked, and joined in amusements, but he soon relapsed, became more abstracted and inaccessible, took to stripping himself and running about naked, and became impulsive. Latterly his habits were faulty. Discharged by order of the petitioner after 10 months.

(23) R.W.J. Three years retarded at school. Worked on farms when he left school, his maximum pay being 14/- a week. Family history is normal, and no reason for his psychosis is known. Admitted age 20 suffering from Schizophrenia. He was restless, garrulous and incoherent unable to answer questions or to appreciate the nature of his surroundings.

He soon improved sufficiently to answer questions, when he proved to be quite disorientated, was unable to give any account of his past, and was solitary and averse to contact with other patients, at this stage he exhibited a variety of mannerisms. After 8 months he began a slow but continuous improvement and was discharged after 15 months.

(24) W.P.H. He was four years retarded at school, and on leaving school never followed any occupation for more than a month or two. Like his brother (Case 8) he became a tramp, but he appears to have been more honest.

His brother and his sister are both schizophrenics in this Hospital.

Admitted age 21, suffering from Schizophrenia.

He was then foppish in dress, affected in speech, silly and irresponsible in conduct, and incapable of sustaining a conversation for more than a few sentences. He has steadily degenerated, is slovenly and untidy, is manneristic, associates only with patients of very low mental standing and is rapidly approaching complete dementia.

(37) C.R.W. Two years retarded at school. There is a long gap in this history. He is remembered by my informant as a somewhat stupid and babyish boy of 15, but all I can learn after that is that he went into domestic service of some sort about 1905 or 6. He next comes into view in 1917 when after home service in the Army, he was admitted here with symptoms suggesting schizophrenia. After a few months he was discharged unimproved and was kept at home until 1930, when his father died and he had to be certified to ensure proper care and control.

He is 40 years of age, is untidy and unclean, can give no account of himself, stands in fixed attitudes for prolonged periods, shows stereotypy and verbigeration, is devoid of initiative and is idle and asocial. His condition is stationary.

(26) T.M. Two years retarded at school. He left school aged 14 and was found employment with a large drapery firm. For more than two years, when he was doing errands, packing etc., he did passably well, but when he was promoted to the counter he quickly lost his job for inefficiency and insolence to customers. After that

he drifted from post to post, but could not keep employment. He was certified because his mother was afraid of him. He had broken down doors, smashed furniture, and assaulted her.

He was admitted aged 20, suffering Schizophrenia. He was petulant and childish in speech and manner, full of self-pity, his attention was difficult to retain, he was destructive, and bullied defenceless patients. After 10 months he was discharged, but was almost immediately readmitted, when he developed delusions of persecution at the hands of the staff and of his relatives, developed mannerisms, and soon became slovenly and untidy. His dementia is progressive.

Mental Defectives at L.C.C. Training Colony Darenth, who Developed Psychoses.

(3) Age 42. A primary ament of mental age 8. There is one defective sibling.

He is suffering from Manic-Depressions psychosis of unknown duration. He is elated and self-satisfied, talks freely in a rambling fashion, and resents any attempt to confine his train of thought to one object. There is a definite history of an attack of depression with retardation of speech and action. He is deteriorating, as only three months ago he was a useful worker, but now cannot be trusted to finish any task as he is too distractible.

(6) Aged 41. A primary ament of mental age 10 years. No family history available. He is suffering from Paraphrenia of unknown duration. He has visceral sensations which he ascribes to demonaic possession, and at times he hears his demons talking. In his efforts to escape from them he commits acts of violence on doors, windows and persons. He shows no evidence of schizophrenia and while simple and gullible he is able to give a clear account of his past and present life and describes his symptoms clearly. There is no evidence of increasing dementia.

(9) Aged 30 years. A primary ament of mental age 7 years. No family history available. He is suffering from Simple Schizophrenia of four years duration. Formerly a useful worker, in the printer's shop, the highest grade of patient labour, he became inattentive, apathetic to reward or rebuke, and solitary in habits, and is now engaged in envelope folding, work performed by the lowest grade of patient capable of steady employment. He formerly lived a full social life on equal terms with the highest grade patients but is now incapable of taking part in any amusements, and is unable to converse. His deterioration appears to be progressive.

(11) Aged 23 years. A primary ament of mental age 6 years. His mother is stated to be mentally defective, and he is one of three illegitimate children. He is suffering from Schizophrenia of unknown duration. Formerly of sufficient intelligence to pass a recruiting officer and serve in the Army for four months, he is now unable to answer such questions about himself as would be necessary to fill up his papers. As a rule he is apathetic and uninterested, quite out of touch with his environment, and answers questions only after several repetitions. There is a history of outbreaks of impulsive violence, but these are fewer lately, and he is growing more apathetic, helpless, and demented.

(14) Aged 40 years. A primary ament of mental age 11 years. No family history available except that his mother is paralysed and deaf. He is suffering from Schizophrenia of four years duration. He was formerly a skilled

worker in the printers shop, a good conversationalist with a wide, if childish range of interests, and a prominent and popular figure at all Colony amusements. He has gradually deteriorated through all the simpler occupations, until he is now unemployable. He never at any stage showed active symptoms, his illness being a progressive loss of interest and of intelligence. He is now completely demented, replies to questions by an incoherent mumble, has to be dressed and undressed, and is faulty in habits.

(15) Aged 21 years. A primary ament of mental age 8 Years. No family history available. He is suffering from Schizophrenia of 1 years duration. He was formerly bright and cheerfully brisk in movements, a fair worker if his tasks were sufficiently varied, but incapable of sustained attention. He was notorious for his readiness to resent any injury or slight by physical violence. During the last year he has gradually become dull, slow in thought, and tending to stereotypy. He is occasionally noisy and restless and makes impulsive attacks on other patients. He is still capable of a little mechanical work under supervision.

(17) Aged 18. A primary ament of mental age 5 years. Family history healthy. He received an injury to the head in a bicycle accident when 5 years old, and his condition is ascribed to this by his relatives. It is unlikely, however, that an accident so late in his childhood is the sole cause of his amentia.

He is suffering from Schizophrenia of five years duration. He was never very alert or active, but was sociable, enjoyed attending entertainments, was fairly neat in person, and did a fair amount of medium grade work. He gradually became apathetic, lost his taste for amusements and his capacity for work, became grossly untidy, and became unable to converse. He answers questions by yes and no at random and never initiates a conversation. His deterioration is progressing.

(29) Aged 45 years. A primary ament of mental age 6 years. No family history available. He is suffering from Premature Senility of 4 years duration. Four years ago he was a good worker, unusually reliable and trustworthy, clean, tidy, and self-respecting. Since then he has gradually deteriorated until he is now grossly untidy, faulty in habits, steals, hoards rubbish, and is solitary in habits. He looks much older than his years, has become bowed in figure, and has marked arterial sclerosis.

(35) Aged 40. A primary ament of mental age 5 years. The family history is bad, and his mother and a brother are both under treatment in mental Hospitals. He is suffering from Schizophrenia of about 1year's duration. A year ago he was a fairly steady worker, could converse fairly well, was sociable and showed fair initiative and social independence. He very rapidly deteriorated and is now untidy in person, solitary in habits and quite unemployable. He is apathetic and while he has himself

lost the capacity to plan he will attempt to carry out any mischief suggested by others. He is becoming worse.

(48) Aged 27 years. A primary ament of mental age 7 years. His father was an epileptic, and five siblings died at birth. He is suffering from Epileptic Insanity of unknown duration.

He is untruthful, a pilferer and tale-bearer, and a hypocrite. He occasionally performs ostentatiously kindly and unselfish actions and talks of them for weeks. In the post-epileptic state he has delusions of bodily change, stating that his eyes and ears are altered and useless. He is at these times irritable and prone to violence, always exercised on weaker patients. His condition is stationary.

TABLES AND STATISTICS.

Where advisable I have shown statistics both in tabul forms and as graphs.

TABLE I.

Number of Male Mental Defectives complicated by Psychoses and of total male admissionsto Salop Mental Hospital 1927 - 1930.

	Total Admissions.	Mental Defect. & Psychoses.	Percentage.
1927	71	8	11.2
1928	70	6	8.6
1929	76	6	7.9
1930	73	6	8.2
Total	290	26	8.96

TABLE II. Types of Psychoses.

		Schiz-ophrenia	Para-phrenia	Epi-leptic Psych-oses.	Manic Depr-essive	Org-anic	Prem-ature Sen-ility.
Salop Ment. Hosp.	26	21	1	1	3	0	0
Darenth	56	40	3	6	4	1	2
Total	82	61	4	7	7	1	2
Percent-age.	100	74.4	4.9	8.5	8.5	1.2	2.4

TABLE III. Varieties of Schizophrenia.

		Simple	Hebephrenic	Katatonic	Paranoid.
Salop Ment. Hosp.	21	12	2	0	7
Darenth	40	32	2	3	5
Total	61	44	4	3	12
Percent-age.	100	69.8	6.4	4.8	19

TABLE IV. Mental Ages of Psychotic Aments.

		4	5	6	7	8	9	10	11	12	
Salop Mental Hosp.	26	0	0	1	2	0	1	5	6	11	
Darenth	56	9	8	10	8	13	2	4	3	0	
Total	82	9	8	11	10	13	3	9	9	11	

GRAPH 1.

Horizontal = Mental Ages.
Vertical = Number of Patients.

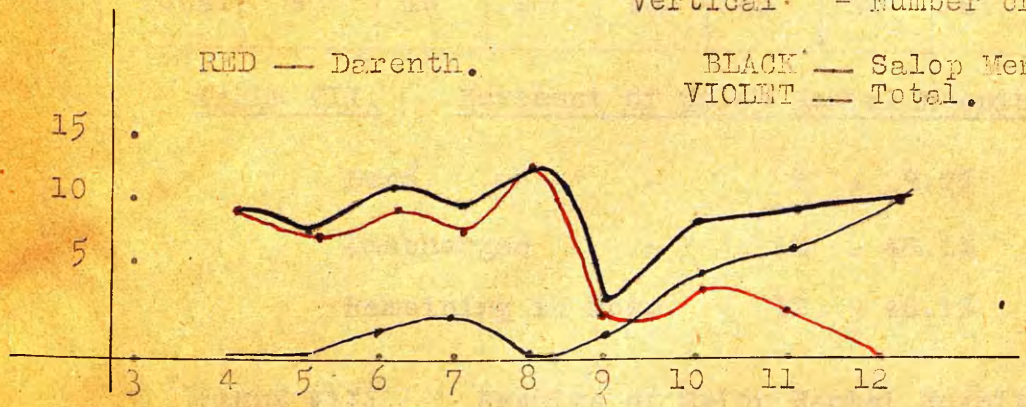

TABLE V. Ages of Cases of Mental Deficiency at Onset of Complicating Psychoses.

		Under 15	15-19	20-24	25-34	35-44	Not Known.
Salop Mental Hosp.	26	0	6	8	9	3	0
Darenth	56	1	14	7	16	10	8
Total	82	1	20	15	25	13	8

GRAPH 11.

Horizontal = Ages.
Vertical = Number of Patients.

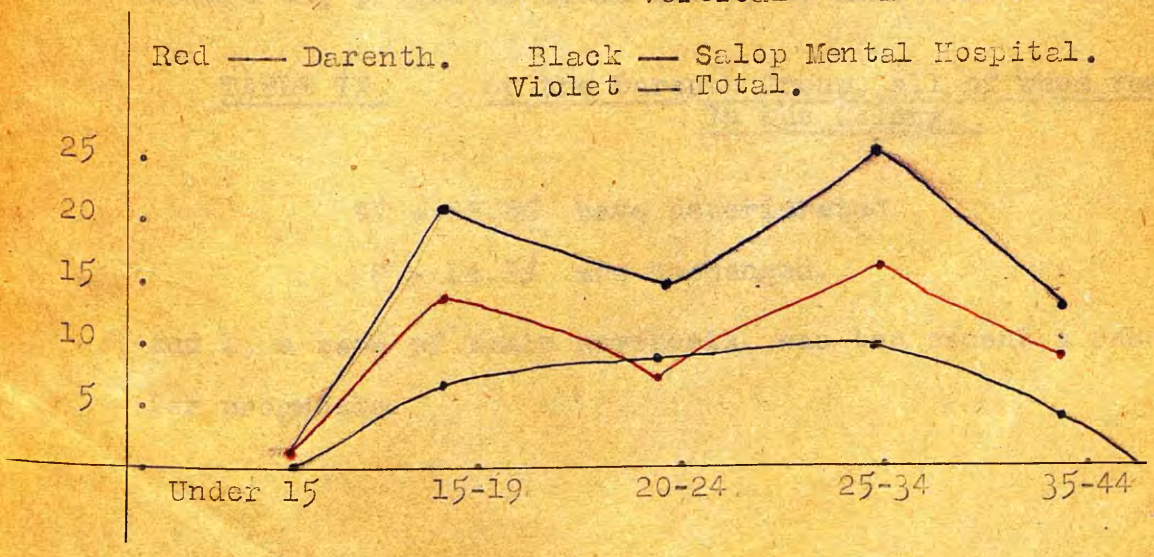

TABLE VI Ages on Admission of all Male Patients to Salop Mental Hospital.

	Under 15	15-19	20-24	25-34	35-44	45-54	55-64	65 & Over	Total.
1927	2	4	4	9	10	12	15	15	71
1928	1	2	4	12	13	11	14	13	70
1929	0	2	6	12	12	12	15	15	76
1930	1	2	7	10	11	17	17	10	73
Total	4	10	21	43	46	52	61	53	290

TABLE VII. Movement of Salop Mental Hospital Cases.

Dead - -	2	= 7.7%
Discharged -	12	= 46.1%
Remaining in Hosp.	12	= 46.1%

TABLE VIII. Results of Salop Mental Hospital Cases.

	Deteriorated.	Unchanged.
Dead - -	1	0
Discharged - -	9	3
Remaining - -	8	4
Total - -	18	7
Percentage - -	72%	28%

One case died in an acute phase of his illness, before any prognosis could safely be made.

TABLE IX. Of the Darenth Group, all of whom remained In the Colony.

47 = 85.5% have deteriorated.

8 = 14.5% are unchanged.

and 1, a case of toxic psychosis, was too recent a case for prognosis.

TABLE IX.

The following figures show the incidence of the psychoses on the male Mental defectives of Shropshire, as compared to their incidence on the normal population of the same County.

The figures are obtained as follows:-

(1) The Mental Defective Psychotics are the 4 year group of cases at Salop Mental Hospital, already given in detail.

(2) The mental defective non-psychotics are the ascertained male cases of mental deficiency in the County.

(3) The non-mental defective psychotics are the male admissions to Salop Mental Hospital, less (1).

(4) The normal population are the estimated male population of the County.

The steady rise in the number of (2) is due to improved methods of ascertainment of mental defect preparatory to and following on the administrative changes embodied in the Local Government Act of 1929.

Mental Defective Psychotics / Mental Defective Non Psychotics	..	Non Mental Defective Psychotics. / Normal Population.		
1927	$\frac{8}{320}$ ::	$\frac{63}{120,190}$	= $\frac{1}{40}$ ::	$\frac{1}{1908}$
1928	$\frac{6}{372}$ ::	$\frac{64}{120,298}$	= $\frac{1}{62}$ ::	$\frac{1}{1880}$
1929	$\frac{6}{421}$ ::	$\frac{70}{120,406}$	= $\frac{1}{70}$ ::	$\frac{1}{1720}$
1930	$\frac{6}{498}$ ::	$\frac{67}{120,514}$	= $\frac{1}{83}$ ::	$\frac{1}{1799}$
		Average	$\frac{1}{63}$ ::	$\frac{1}{1827}$

To sum up the results of my investigation:

(1) The clinical observation that many cases diagnosed as psychoses were really cases of amentia and psychoses has been found to be correct.

(2) The comparative study of the aetiology and pathology of amentia and the psychoses provides considerable evidence in support of (1).

Neuropathic heredity is found to be present in at least 50% of each disease. Further, many other conditions which are found frequently to be a sole or an associated cause of amentia -- e.g. alcoholism and chronic infections -- are also found as precipitating factors in the psychoses.

Also, such aments as are sufficiently alert and self-conscious as to attempt to adjust satisfactorily the relationship between themselves and their environment have little chance of succeeding, and are by reason of their inherent incompetence, likely to develop into abnormal reaction types.

Both in amentia and in such of the psychoses as have a definitely established pathology the seat of the primary lesion is the same -- the supra-granular layers of the cerebral cortex.

The changes in these layers found in Schizophrenia bear a close resemblance to the developmental faults found in amentia.

The pathology of the cerebral neurones in amentia is such as to lead one to expect defective durability and poor resistance to vitiating influences of any sort, with, in consequence, a greater liability to the development of psychoses.

(3) The psychosis most frequently complicating amentia is Schizophrenia, which developed in 74.4% of the cases examined, the form most commonly observed being Simple Schizophrenia (68.8%). The Manic-Depressive and Epileptic psychoses come next with 8.5% each, and Paraphrenia developed in 4.9%. Premature Senility, 2.4%, and one case (1.2%) of organic insanity, acutely confusional in type, complete the number.

(4) The course of the Schizophrenics is rapid, and the prognosis almost uniformly bad. The Manic-Depressive psychosis, on the other hand, is brief in its acute phases, does not recur with more than average frequency, and in the majority of cases causes little if any increase of feeble-mindedness.

The other psychoses do not differ in their course and prognosis from that observed when they occur in the normal individual.

(5) The discrepancy between the incidence of the psychoses on the defective and on the normal is very striking.

While only one normal male out of 1827 in Shropshire develops a psychosis, one out of every 63 male defectives is thus affected.

That is, in proportion to their numbers, the psychoses are 29 times more frequent in the mentally defective than in the normal population.