I cannot finish my remarks without paying tribute to the work of the Pathological Department of the New South Wales hospitals for insane, with its central and subsidiary laboratories. Mention must also be made of the fact that while in Victoria we have not had that full use of the pathologist that was intended and expected, an enthusiastic young medical officer, Dr. Lind, skilled in ward work, has been permitted to go to Europe for the purpose of studying in this direction—a notable departure. Rich opportunities for study will present themselves when the Victorian Acute Mental Hospital with its equipment is used for the purpose for which it was built.

A whole-time departmental pathologist should, however, be appointed, and adequately paid to work in conjunction with a neurological laboratory at the Melbourne University. Some such scheme is at present under consideration, and we may hope to hear some definite views on this matter during our discussions. Here I leave my suggestions.

In conclusion, these few desultory words will not have been in vain if I have brought home to the minds of those young and eager spirits gathered here, that we, who daily witness the loss of human reason and the widespread terror and suffering such a happening entails, should be upheld by the conviction that any conscientious effort to establish the causes of insanity on a more exact basis, however barren of result, will at least never merit the reproach of waste of time.

The Classification of Insanity[1].

By JOHN TURNER, M.B., Medical Superintendent, Essex County Asylum, Brentwood.

BEFORE attempting a classification, it is desirable to define what we exactly mean by insanity. It is not an easy matter. Who is to say where the dividing line is to be drawn between the sane and the insane? The one state passes insensibly into the other, and a division, which may be valid in certain circumstances, may not be so in others.

Broadly speaking, every individual whose conduct is out of harmony with his environment is insane; the angry person incapable of listening to the voice of reason is so while his passion persists. But these transient states of insanity,

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whilst they concern the psychologist, are outside the sphere of the alienist. As medical men we must extend this definition so that it includes only prolonged or persistent want of harmony with the environment, and, for all practical purposes, the definition of insanity that it is a state in which conduct is persistently out of harmony with environment meets the case. But it does not follow that everyone who conforms to this definition is a proper person to be shut up in a lunatic asylum, or compelled by law to submit to medical treatment. An individual may be the subject of chronic insane delusions, but so long as he is not a source of danger to himself or to others, nor an annoyance to the community, the law has no right to control his liberty. Therefore to define such cases of insanity as are certifiable, we must still further expand the definition, so that it now appears as follows: A certifiable lunatic is one whose conduct (owing to disease) is persistently out of harmony with his environment, and who is, or may become, a source of harm to himself or a danger or annoyance to the community.

Every student of insanity, consciously or unconsciously, evolves a classification, for no subject can be studied without one. All knowledge resolves itself into classification, for all we can know of phenomena is comprised in comparing one phenomenon with another and noting likenesses or differences.

It may be a mere catalogue, in which the cases are bracketed together by superficial likenesses, and in which the sub-divisions have only an arbitrary relationship to each other, very much as if a librarian were to classify his volumes according to their size, bindings, and whether illustrated or not. It would make no difference where he placed any of his divisions. But a classification to be anything more than a mere catalogue must have some natural basis for its justification, where each class of cases and each variety has a definite position closely related to its adjoining classes and varieties, so that their position cannot be altered without upsetting the whole scheme. The problem of a natural classification is one, therefore, of the first importance, but unfortunately it is also one of the most difficult to solve, and the reasons are not far to seek.

In the first place the human brain is an organ of wondrous complexity, and yet it functions as a unity, that is to say, that

just as each ego, each personality is not a multiplicity of incongruous and disjointed complexities or entities, so the physical basis on which the ego depends is also a coherent entity, and interference with any part, however small, of this physical basis has far-reaching influences, affecting in a greater or smaller degree the whole mechanism.

All physiological observations and experiments tend to show that each of the highest nervous centres represents every part of the organism, some parts in greater, others in less degree, some more directly, others more indirectly.

Moreover, the same interference in different persons will often produce widely different results, a condition of affairs depending in large part on differences of disposition or temperament. And differences of temperament are resolvable into structural differences. They may be defined as the peculiar reaction of different individuals to similar external stimuli.

When an efficient projection system, consisting of linked-together nerve-cells, is discharged, there is evidence that its molecular constitution is disturbed, and a more stable nervous substance is formed, which requires a stronger stimulus for its re-discharge. And the converse of this is also true, that the longer the nerve-cells have been left undischarged, the slighter is the stimulus required to discharge them.

On the psychical side there are reasons for believing that states of restlessness, cravings, feelings of restraint or actual pain are associated with, or the outcome of, efferent projection systems in a state of high tension, that is, in which energy has been accumulating, but is unable, from lack of appropriate stimuli, to get itself discharged or dispersed; on the other hand, the working of these systems, when they are able by the sufficiency of appropriate afferent stimuli to rid themselves freely of their superabundant energy, is psychically associated with a sense of freedom and well-being.

On this capacity or incapacity for the due discharge of the higher associational centres is probably to be found the physical conditions which underlie the different temperaments.

The man of sanguine temperament is one who has an abundant supply of afferent stimuli, acting freely on a not too complex system of efferent projection centres, whilst the man of melancholy disposition is one whose supply of afferent

stimuli is insufficient duly to discharge his efferent projection centres.

In a similar way pathological states of exaltation or depression may be accounted for: conditions which interfere with the due reception and distribution of afferent stimuli will lead to states of high molecular tension in the efferent systems with the psychical correlatives of pain, restraint and depression; whilst conditions which fling out of action certain of the higher efferent projection systems without diminishing the supply of afferent stimuli will allow stronger (because less dispersed) stimuli to act on the remaining efferent systems, so that the cells of these systems are freely discharged and their tension kept low, and on the psychical side there will result feelings of exhilaration, exaggerated well-being, or even maniacal states.

But apart from temperament, there are other conditions which result in similar morbid states, running different courses in different individuals. Age is one of these, and, as Tansi points out, melancholia in the adolescent probably passes into incurable dementia, in the adult issues in recovery, and in the aged remains for years stationary. We may suppose this difference to be associated with differences in the reactive and recuperative capacities of the tissues at these age-periods.

In the young, although on the one hand recuperative capacity is at its highest, on the other hand there is the greatest tendency for lesions in the less specialised tissues to spread and damage the more specialised, whilst in the aged, with general lessened vitality, the tendency for lesions to spread is very small.

The degree of hereditary predisposition is another of these factors. In other words, those brains in which the degree of structural defect is great, or in which development has proceeded up to a certain point and then become arrested when subjected to adverse stresses, react differently to brains in which the degree of defect is less, and in which development within rough limits has proceeded in its normal way.

The conduct of the child and adolescent is conduct in the process of manufacture into a more staid and unemotional type; it is puerile and immature. On the physical side it is associated with, or depends upon, immature or imperfectly organised centres of association, and when these young people

are subjected to sufficiently powerful adverse stresses, the symptoms evoked will tend to reproduce in a distorted and exaggerated form the unbalanced conduct normal to the child.

It is from this anatomical standpoint that an explanation of the bizarre conduct characteristic of the class of cases now termed dementia præcox is most readily to be found.

A further reason which adds to the difficulty of the classification of mental diseases is, as Tansi also points out, that "we are unable to estimate the psychical value of an affected cell by pathological anatomy. Unlike the cells of the liver, etc., they are not functionally equivalent, but in respect to exciting causes they exhibit the same vulnerability, whatever the psychical treasure they may contain."

This infinite diversity and complexity and inter-dependence of the nervous apparatus, the individual differences of reaction of the higher nervous centres to similar stimuli, the effects of age and heredity predisposition, and the further fact that nerve-cells are not functionally equivalent, though their vulnerability to lesions is equal, form some of the chief reasons whlch serve to complicate the classification of insanity.

In fact, in the present state of our knowledge, it is impossible to frame a scheme that shall have a definite niche for every class of case, and it is far more profitable to distinguish indefinite cases by periphrastic means, rather than attempt to push them into single-word pigeon-holes which they do not properly fit.

Such difficulties point to the absence of hard and fast dividing lines between the different varieties of insanity. The forms all tend to grade one into another; there are merely different forms of one insanity, and these forms represent syndromes and not neurological entities.

The scheme now proposed is constructed mainly on an anatomical basis. Its chief groups are differentiated by anatomical peculiarities, but the varieties or sub-divisions are largely symptomatological or have merely prognostic differences.

The anatomical data indicate that all the varieties of insanity, from their intrinsic aspect, depend upon quantitative rather than qualitative changes in structure. J. S. Bolton's micrometrical observations show that a definite lack of development of certain of the cortical layers is demonstrable, not alone

in the congenitally weak-minded, but also in a less degree in recent cases of insanity.

The other chief anatomical distinction is a form of immature or badly developed nerve-cell, which occurs in a large proportion of all cases of insanity.

The lunatic, as Bolton asserts, is born, not made, in the sense that it is not possible for a person to become insane in default of a certain amount of structural deficiency in the manufacture of his brain, excluding, of course, gross lesions, as injuries, tumours, or such like. It is open to anyone to produce in himself a temporary insanity by swallowing a certain amount of alcohol : every drunken man is for the time being an insane man, and the circulation of poison in the system during the course of fevers, or as the result of a sepsis, will often produce temporary derangement, even in those with the most stable and well-developed nervous system ; but in all such cases, so soon as the noxious agent is got rid of, the mental disorder disappears and the patient returns to a normal frame of mind. These cases are logically and psychologically cases of insanity, but the alienist has to deal almost entirely with cases of persistent insanity and not with these transient attacks, which will therefore find no place in this classification.

According to this classification, there are two great classes of insanity :

(1) The idiopathic or those hereditarily predisposed, embracing by far the larger number of individuals.

(2) The traumatic or accidental.

All cases of idiopathic insanity may be divided into three classes according to the degree of anatomical change or developmental defect in the cortex. But inasmuch as the difference between individual cases is merely a quantitative one, the boundaries of these classes are ill defined, and cases near the extremes of the different classes are often difficult to place.

The first class consists of the imbeciles (with or without epilepsy), in whom the structural defect is of such a degree that the nervous system is incapable, at the outset of life, of performing its functions in an efficient or normal manner.

The second class is formed of those whose structural defect is of such a degree that, although their brain is capable, up to a certain point, of performing its functions efficiently, yet it is

incapable of withstanding the physiological and inevitable stresses of life.

The third class comprises the cases of acquired insanity, that is, all those who are able to withstand the ordinary physiological stresses, but break down when exposed to the influence of adventitious unfavourable circumstances, or with advanced age. Thus the third class includes cases the result of perversions of metabolism due to pathological changes in renal, hepatic, or blood-vascular systems.

In all of these classes, with the exception perhaps of some low-grade imbeciles, besides the structural defect—the intrinsic factor—there is required also, in order to precipitate the attack of insanity, an external stress—the extrinsic factor—which is in inverse proportion, as regards its potency, to the intrinsic, so that where the one is marked or powerful, the other need only be slight or weak. This is an important point to bear in mind, for on this relation between these two great factors depends the position of the different varieties in the classification. It is indicated in the accompanying scheme diagrammatically by the plain and shaded areas.

This relative interdependence of intrinsic and extrinsic factors is a fundamental point also in the schemes of classification of Tansi and J. S. Bolton.

The large class of cases now termed "dementia præcox" fall into the second group; in fact, they form this group entirely.

The members of it may be described as persons living on their capital; they may, and often do, start life with the promise of great brilliancy, but all their stock, to use a business metaphor, is in the window; they lack reserve force, and, in consequence, they prematurely break down. A person with a capital of a thousand pounds can live at that rate with considerable show for a year, at the rate of five hundred pounds for two years, but the normal rate which his means allow him is very much less. In a similar manner with the subjects of dementia præcox, the more brilliant they may be to start with, the more rapidly they deteriorate.

Not all adolescents who break down mentally are cases of dementia præcox, but only those who do so mainly owing to physiological stresses. Some young persons break down owing to the potency of the stresses to which they are subjected

much earlier in life than they would have done if not so exposed. The victims of renal, cardiac or hepatic disease, of exhaustion, and, above all, of acute or subacute toxic conditions, may manifest insanity during the adolescent period, and yet not be cases of dementia præcox, and many of these cases show the substratum of peculiar symptoms, such as emotional stolidity, mannerisms and bizarre conduct usually associated with dementia præcox. This is not altogether a purely academic distinction, because, however much these last may resemble cases of dementia præcox—and very often it may be impossible to differentiate them clinically—their prospects of making a serviceable recovery are much better than they would be if they were truly cases of dementia præcox.

Because, therefore, certain cases of adolescent insanity are not cases of dementia præcox, and certain cases of dementia præcox do not develop until long after the adolescent period, it is not advisable to replace the term "dementia præcox" by that of "adolescent insanity."

Group 1 of this classification is further sub-divided, chiefly on clinical grounds at present, but, theoretically, according to the extent of the initial defect of cerebral structure, into low, medium, and high-grade imbeciles.

Under the first or low grade come those cases incapable of adjusting themselves, even to the simplest environment, and which, therefore, unless cared for by others, would perish. These form the group which in most schemes are styled "idiots."

Under the medium grade come those who are able to attend to themselves, and are, perhaps, able to do simple work under supervision.

And under the high grade those who are able to attend efficiently to their bodily needs, keep themselves clean, and are able to do their simple work intelligently and well. In certain directions their intelligence may seem to be above that of the class from which they are drawn.

But on this defective soil may be grown all, or nearly all, the varieties of insanity met with. Imbeciles of the higher grades may simulate cases of dementia præcox in all its forms, or suffer from the different forms of affective, confusional or delusional insanity, etc. They may also become general paralytics of the acquired, as well as of the congenital, type.

The second group—the precocious dements—it is usual to subdivide into the three varieties of Kraepelin—katatonic, hebephrenic and paranoidal—of which unquestionably the katatonic is the predominant and best marked form. When dementia præcox is spoken of without a prefix it signifies this variety.

The hebephrenic group is much less satisfactory; for one reason it is too large and embraces too many cases, and, for another, no two observers seem to be agreed as to what exactly constitutes a case of this form. With Kraepelin it denotes all those cases of dementia præcox in which a uniform, more or less profound condition of mental weakness is developed under the accompanying influences of subacute, more seldom of acute, mental disturbance. The memory for recent events soon deteriorates, and confusion of mind results. Marked dementia occurs in from five months to several years. Were this definition strictly adhered to, many cases regarded as dementia præcox, not alone by myself, but by others, would have to be excluded, in spite of the existence of many of the most characteristic symptoms, and which fit neither into the katatonic nor the paranoidal groups.

Lugaro's conception is similar to that of Kraepelin, but, according to him, in the first stage it unfolds itself with rapid and sometimes violent changes, with states of excitement and depression, with discordant and eccentric, puerile, impulsively violent, or obstinate conduct.

Stoddart recognises two sub-divisions: (1) the depressed, —some of these subsequently become exalted, and (2) cases chiefly characterised by motor restlessness, in which deterioration is more rapid than in the first group. According to him, seclusiveness, or the habit of getting away into odd nooks and corners, is one of the distinguishing features of the hebephrenic group.

In only two points do different writers seem to be in accord; the first is the affective character of the disorder at some period or other of its course, and the second is the absence of marked katatonic symptoms; but even on this latter point, as Tansi remarks: "In all cases of dementia præcox, whatever the clinical variety to which they belong, absurdity of behaviour spreads a shadow of katatonia beyond the limit of the katatonic variety." The hebephrenic variety,

indeed, at present seems very much in the nature of a rubbish heap, wherein to throw cases that do not readily conform to the other two types.

As a matter of fact a large number of cases in this group exhibit similar symptoms and run a similar course to those of the different varieties of acquired insanity, but in all there is a basis of puerile conduct.

If dementia præcox cannot be cut up into stereotyped varieties from the symptomatological aspect, the only other reasons for attempting sub-division will be from pathological or prognostic points of view, and so far the first of these is not possible; we must therefore turn our attention to the prognostic outlook.

There are certain cases in which the prognosis is more favourable than others, and especially among the hebephrenic group are a number in which a favourable prognosis may be given and which improve and make serviceable recoveries.

The third sub-division comprises the paranoidal forms of dementia præcox. Kraepelin emphasises the *unsystematised* nature of the delusions and the invariable, or almost invariable presence of hallucinations, as opposed to paranoia, in which systematised delusions are an essential feature, and in which it *is extremely rare to have hallucinations.* In Tansi's opinion, also, chronic hallucinations are almost pathognomonic of this form of dementia præcox. But Bevan Lewis, on the contrary, finds hallucinations (almost invariably aural) present as an early symptom in typical systematised delusional insanity.

In my own practice I divide all delusional cases into two groups:

(*a*) Those without a basis of puerile and perverse conduct, the cases to which I restrict the term "chronic systematised delusional insanity," and which I place in my third group. In such cases there is a systematised delusional basis, slowly growing and passing through certain stages, which, granting the premises, are logical. The affective side is little or not at all implicated, only, that is, to such an extent as would be normal in the circumstances in which they imagine themselves to be placed. These cases, apart from their delusional sphere, are generally well behaved and more or less act in consonance with their exaggerated ideas.

(*b*) Those with a basis of puerile and perverse conduct, to

which I restrict the term "paranoia," and which I regard as instances of dementia præcox—the dementia præcox paranoides of other authors. With these cases we get a very different picture; amongst them are to be found the pests of all asylums. The affective sphere is markedly implicated. Their delusions may be, and generally are, systematised, and of a persecutory nature. They are intensely conceited, easily offended, cunning, and able to conceal their delusions when examined and to quibble with questions in a most annoying manner. They are mischievous, and stir up their fellow-patients to rebel and to break rules. They constantly bring groundless charges of ill-treatment against the staff. The "*cacoëthes scribendi*" is enormously developed, and they cover reams of paper with writing. The format of their letters is characteristic: as a rule the writing is exceedingly neat, every inch of surface is occupied by it, and not only the paper but the envelope is covered. Sometimes two or more colours are employed to add to the effect.

Whilst hallucinations of hearing are commonly to be met with in this class they are not invariably present, or at all events not invariably discoverable by the observer.

From all that has been said it will be gathered that the sub-divisions of dementia præcox are not very satisfactory. Katatonia, indeed, forms a well-marked group, but all cases are apt to take on katatonic characteristics at some time or another in their course. In fact the longer the time that a case is under observation, the more often one meets with this liability to pass from one phase of this disorder to another; at one time it will present marked katatonic features, at another hebephrenic, and at another paranoidal, and it may swing backwards and forwards between these three. But inasmuch as some cases make satisfactory recoveries whilst others go from bad to worse, we must endeavour to pick out signs or symptoms by which these favourable cases may be recognised.

General paralysis may occur in a case of dementia præcox, but it is not frequent, for the majority of the members of the group are too old for the juvenile and too young for the acquired form of general paralysis.

Nearly all authorities recognise that in dementia præcox there is a constitutional defect of the nervous system, but in my classification an attempt is made to apportion the degree

of defect in relation to the other varieties of insanity. From the point of view taken of the disorder, it is evident that it cannot be regarded as a nosological entity, but as closely allied on the one hand to imbecility, and on the other to certain cases of acquired insanity; nevertheless the peculiarity of the symptoms and the gravity of the prognosis in a very large number of the cases justify us in according to it a separate group. The peculiarity in the symptomatology may, it is suggested, be accounted for by the unorganised and undeveloped state of the higher associational nerve-centres in these cases. The symptoms met with are those normally occurring in naughty and wilful children, but in an exaggerated degree.

Thus although I look upon dementia præcox as only a sub-division or variety of insanity, it is a very important one, and our indebtedness to Kraepelin is great for having pointed it out, and describing in such a graphic manner its salient features.

One of the chief objections which the opponents of Kraepelin, now a rapidly decreasing minority, urged against dementia præcox was that, if there were such a disease, it was not new, that they were familiar with the symptoms, and had frequently pointed them out. Very true, but with the exception, perhaps, of Clouston, who comes in his account of adolescent insanity very near to Kraepelin, it was an instance of seeing but not perceiving. Griesinger, in 1845, described one phase of the disorder under the name of "melancholia with stupor" so clearly that it might be inscribed word for word in the latest text-book as a description of the katatonic form of dementia præcox, but he, as well as many other later observers, failed to perceive the essential identity between this phase and the various other phases of this protean disorder. The symptoms could hardly fail to be seen by any competent observer, but their significance and inter-relationship were not discovered until Kraepelin pointed them out.

Group III.—The acquired insanities.—They occur, with few exceptions, at the period of life when the physical mechanisms underlying the "ego" are fully organised, and, therefore, with these few exceptions, they fail to show the background of childish conduct which characterises the whole of the second group. In their sub-division an attempt has been made to range them in the order of the degree of their

structural defect, so that at the top, nearest to the second group, we have cases of epileptic insanity, and then the lucid insanities (psychasthenia, morbid obsessions and impulse), in which, as their name implies, there is no very marked disorder of the judgment. The victims are aware of their condition ; they may have delusive ideas which they recognise as such, and they may even take steps (often, however, ludicrously inadequate) to prevent their impulses from taking effect. It is from cases of this class that subtle dialecticians seek to prove there may be disorder of conduct without disorder of mind. But although their conduct viewed in part is logical, in part, in the sphere of the obsession, it is illogical and insane. The behaviour of such cases can readily be accounted for on the modern view of the disintegration of the " ego "—a view which covers the whole field of insane conduct, whether in dementia præcox or the acquired forms. On this assumption a portion of the " ego " becomes, as it were, detached from the rest, and this split-off complex exerts, either continuously or periodically, a dominating, but usually unconscious, influence over the remaining mutilated personality.

In this group, also, cases of general paralysis are met with, but general paralysis itself has no right to a place in a classification of idiopathic insanity any more than tumours of the brain or the various gross visceral affections, with which are associated, more or less, well-marked alterations in the mental state.

In one sense every disease is a mental disorder, inasmuch as it presents psychical modifications, but there should be a definite relation between the bodily and mental phenomena to constitute a mental disorder in the true sense of the term, certain psychical processes presupposing a certain physical basis. The known and demonstrable lesions of general paralysis are things entirely apart from the mental disorder which may be found in this condition. The accompanying mental states may take the form of manic-depressive, delusional or confusional insanity, but it is possible, although rare, for cases of general paralysis to run their course with no marked mental perversions. The lesions of general paralysis interfere with the finer physical basis underlying certain mental processes, and it is these finer physical lesions which constitute the physical basis of the mental disorder.

A tumour lodged in the brain may induce mental disorder, but no one would suggest that the tumour itself was entitled to a position in a classification of insanity.

Hysteria is closely allied to the lucid insanities ; but whether, as Babinski supposes, it is essentially an insanity of suggestion, is doubtful ; at any rate, the predominating symptom is suggestibility, which Tansi supposes comes from the disposition of the nervous centres to react anomalously under the influence of stimuli which in normal persons escape notice or are insignificant. In his view it is "less a disease than an anomaly of the nervous equilibrium ; it never leads to dementia and its manifestations are never irreparable." All its symptoms may be induced in hypnotic subjects, but to be a hypnotic subject itself suggests an inherent anomalous condition of the brain. It is a state which appears only to differ from dementia præcox in its remarkable tendency towards recovery.

It is generally assumed that the theories of hysteria advocated by the three great authorities on this disorder—Babinski, Freud and Janet—are more or less antagonistic to each other, but this is not so.

Babinski and Janet, in their hypothesis of suggestibility and restriction of the field of consciousness respectively, attempt to show what hysteria is and not how it comes about, whereas Freud's hypothesis is an explanation of the mechanism of hysterical symptoms themselves.

Babinski claims that suggestibility is the pathognomonic symptom of hysteria, Janet that it is restriction of the field of consciousness, but the first of these may very well be the outcome of the latter, so that there is no antagonism here, whilst Freud holds that hysteria is essentially a condition of disintegration of the "ego"; but if we assume with Freud that there is a splitting up of the "ego" into two or more parts, one of which functions subconsciously, this also yields a valid explanation of the existence of suggestibility and restriction of the field of consciousness. The mechanism assumed by Freud as the causal factor in hysteria is precisely similar in kind to that which he posits in the case of dementia præcox, but there is this important distinction, that the disorder in the case of hysteria is one that is rarely permanent and usually eminently curable, whereas in dementia præcox the exact reverse is the case.

The affective insanities.—Holding the opinion that the different varieties of insanity are not nosological entities, it is, perhaps, a question of no great moment whether there are or are not distinct forms of mania, melancholia and circular insanity; certainly the larger one's outlook is over cases the less likely is one to meet with pure cases of either mania or melancholia. And if we accept Kraepelin's formula of the three cardinal symptoms of the manic and depressive attacks respectively, it becomes even more difficult to find cases which can be said to fall entirely into one only of the phases. These cardinal symptoms are as follows:

	Manic phase.	Depressed phase.
(1)	Emotional exaltation.	Emotional depression.
(2)	Pyschomotor restlessness.	Pyschomotor inhibition.
(3)	Flight of ideas.	Retardation of thought.

In the mixed forms of manic-depressive insanity, according to Kraepelin, any one or two of the first phase may be associated with any two or one of the second. For example, in the cases which used to be denominated agitated or excited melancholia we get along with emotional depression and retardation of thought, both constituents of the depressed phase, psychomotor restlessness, which is a constituent of the manic phase.

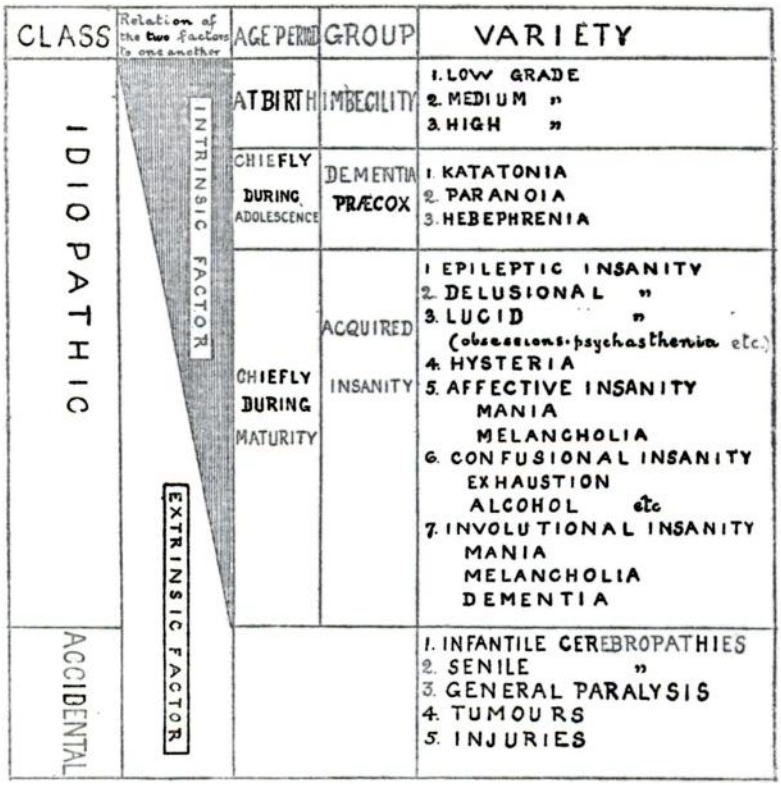
Tansi is in favour of there being a definite melancholic and maniacal diathesis, or of a mixed diathesis, but he is of opinion that "we are bound to conclude that in regard to these forms of mental disorder the ætiological law is made by the patients themselves and not by the disorder." But he considers that cases of true mania are so very rare that out of a thousand patients he had a difficulty in discovering ten.

Traumatic insanity.—This class does not need extended discussion; it includes all cases of insanity arising from gross lesions of the brain (including a certain number of general paralytics).

The infantile cerebro-pathies, under which are placed the cases of idiocy, are organic diseases of the brain occurring in early life, and issuing generally in atrophy of the nervous elements and excessive proliferation of neuroglia. This reactive gliosis in the infant tends to spread, whereas in the adult the reactive gliosis excited by a lesion encloses it in a wall, thereby circumscribing its harmful effects.

Gliosis, however, is not an essential feature in all cases of idiocy; a very interesting class—amaurotic idiocy—nearly always confined to Jewish children, generally fails to show any neurogliosis, although the mesoglia is probably always affected.

The view that idiocy is a result of pre-natal, natal or post-



natal injuries is one that has not found much favour in England, perhaps because it has not received much attention here. It is a view which has much to be said in its favour, and this has been well said by Tansi, to whose writings the reader is referred for an able discussion on the question.

From this standpoint idiocy, instead of being only a more intense degree of congenital defect than imbecility, is transferred entirely from the hereditary to the traumatic class, the two conditions thus standing at opposite extremes of the classifica-

tion. In Tansi's opinion, more and more cases are being detached from the imbecile class and placed among the idiots, so that he thinks eventually the old idea entirely in favour of hereditary degeneration as the intrinsic factor in idiocy and imbecility will give way to the modern idea entirely in favour of cerebro-pathies. This is pushing the idea too far; there are two very distinct classes, the idiots, resulting from trauma, and the imbeciles, resulting from congenital defect of structure, and a study of the heredity in these cases should be one of the means—probably the chief means—of discriminating one class from the other. If idiocy is acquired, there should not be a preponderance of defective ancestry ; if imbecility is a congenital defect there will be (and there is) a preponderance. Even according to Tansi himself, the idiot is devoid of true intellectual and affective anomalies, whereas the imbecile displays them in abundance.

(1) A paper read at the Meeting of the South-Eastern Division on October 4th, 1911, at the Bucks County Asylum.

The Development of Psychiatric Science as a Branch of Public Health.(1) By R. G. ROWS, M.D., Assistant Medical Officer and Pathologist, County Asylum, Lancaster.

ONE of the most striking developments of recent years, a development which may be seen in most countries of the civilised world, is that of the recognition of the necessity for preventive measures against disease. This necessity is not only felt in medical and scientific circles, but is, in many instances, quite as keenly appreciated by members of the general public. Few people are now indifferent to an outbreak of a serious infectious disease even in a distant land; and, in case of an outbreak in our own land, we no longer patiently watch it run its course far and wide without making strenuous efforts to check it, but by investigation we try to ascertain its cause, and by segregation and fumigation we keep it somewhat under control. The report of the spread of the "plague" in Eastern Asia at once led to an inquiry as to our preparedness to prevent its being introduced into this country, and to combat it if it gained an entrance. We have now an army of inspectors whose duty it