may say I have had some little experience of it for some time as a routine treatment. At one period all our epileptic imbeciles at the Royal Albert Asylum, Lancaster, were kept on a vegetable diet for, I think, six months; and then we let a certain portion of them go on with their ordinary diet for another three months. I have not the figures in my mind, but I know the general result was that we did not find very much benefit from the abstention from meat. Very much more benefit was to be traced to the fact of the food being properly comminuted. It was not so much that meat, as meat, as a nitrogenous food, produced epilepsy, as that very frequently the stomach was disordered by the tendency which epileptics have to bolt lumps of meat. If the meat is first passed through a mincing machine there is not that risk. Dr. Bond mentioned a quotation which, I think, was from Dr. Alexander, of Liverpool, with regard to the faculties being on the alert. I think it was his plea that these epileptic patients should not be kept from engaging in such games as cricket, so long as their attention was agreeably kept on the alert, and that they would probably not then have fits. I agree with what fell from Dr. Bond about the inappropriateness of working their intellectual faculties at anything like high pressure, as it would be prejudicial to do so.

After further discussion in which Drs. Carswell, Douglas, Mills, Rayner and Shuttleworth joined, it was agreed that the following resolution be transmitted to the Parliamentary Committee:

"That the Parliamentary Committee of the Medico-Psychological Association be requested to consider the desirability of making the Act of 1899, referring to the education of defective and epileptic children, compulsory on all educational authorities, and not merely adoptive as at present."

The Statistical Tables. By CHARLES A. MERCIER, M.B.

The criticism that, at the Annual Meeting, I applied to Tables IV and VI, was purely destructive, and while it was, as I think, efficacious, it is open to the retort that the criticised tables must stand, unless I can suggest something better. The object of this present communication is to suggest tables which shall not be open to the objections which I have urged against those proposed by the Statistical Committee.

Table IV must of necessity suggest and contain a classification. It is bootless for the Committee to disclaim the intention of classifying. So long as such a table, for such a purpose, is included in their recommendations, they cannot escape from the onus of presenting a classification. As the scheme which is now adopted by the Association will determine in practice the classification which will prevail, in this country at least, for many years to come, it is very desirable that it should be provisionally satisfactory. By this I mean, that it should represent and embody the general state of our knowledge at the present time; that it should receive very general approval and support; and that it should be sufficiently elastic to be adapt-

able to future discoveries. If it possesses these qualities, we may assume, with some confidence, that its adoption will not be confined to this country, but that it will serve as the basis for an international comparison of statistics of insanity.

In my criticism, reported in another page of this Journal, of the table suggested by the Committee, I have laid down three essentials of a good classification. It should include all the things to be classified, and nothing else; it should associate things that are alike, and separate those that are unlike; and it should not include the same thing in more than one class of the same rank. These, I submit, are the general conditions of a good classification. But for a good classification of insanity, something more is required. It is for the use of all sorts and conditions of alienists, from the university professor to the newly-joined assistant medical officer; and from the pathologist, whose labours are chiefly in the laboratory, to the "practical" superintendent, whose interests are mainly in building and draining and painting. It must therefore be easy of application. It must distinguish differences that are easy to discriminate; that are patent, manifest, and free from doubt. It must depend on no niceties or refinements of diagnosis. It must be expressed in terms that are generally agreed upon, or are defined in senses that will be generally accepted. It must rise above the obsolete superstitions of the past, without embodying doctrines upon which time has not yet set the seal of efficacy. I seem to hear Dr. Yellowlees protesting, in the words of Imlac—"Enough; thou hast persuaded me that no man can be a classifier of insanity." Nevertheless, I venture to think the task is not impossible.

The first essential of a good classification has been stated to be that it must include all the things that we seek to classify; so that if this be true, the first preliminary to making a classification is to determine what things are to be classified—what is to be the subject-matter of the classification. Insanity, it will be said. But it is tolerably obvious that no classification can be made of one thing. A single thing can, in a sense, be classified, by placing it in a class among other things; as insanity may be classed among diseases. But this is not the sense in which we are using the term classification. What we now mean by the term, is the distribution of things into classes; the like together, the unlike apart. In this sense, we

cannot classify insanity, if insanity is one thing. Are we then to follow certain writers, and deal, not with insanity, but with insanities? Are there in fact, included in the term insanity, many, or several, things, so distinct from one another that they can be divided into classes, and is this what we mean when we speak of classifying insanity? My own opinion is clear and strong that there are no such divisions within the disorder that we call insanity, but that it is one and indivisible; but it is quite unnecessary to discuss this matter, since it is indisputable that the purpose of these tables is to enable a classification to be made, not of kinds, but of *cases* of insanity; and it is to the classification of cases of insanity that my endeavours will be limited. It will be understood, of course, that a classification of cases of insanity is very different from a classification of insane persons.

To keep as long as possible upon the firm ground of indisputable fact, my next assertion is that no classification hitherto proposed has commanded general assent. If there had been any such classification, it would have been accepted by the Statistical Committee. But, instead of taking an existing classification, they have proposed one of their own. Upon looking through the vast scrap-heap of discarded classifications, I find one identical defect which vitiates them all. The proposers have been men, for the most part, of great knowledge of insanity, but they have had no knowledge of the canons of classification. Now, the primary canon of classification is that the scission of each class must proceed upon a single principle, —must be governed by the presence or absence, or by the modes or degrees, of one single attribute of the things classified. To divide simultaneously upon more than one principle, must produce confusion; and each additional principle introduced, makes confusion worse confounded. This canon has been violated in every classification of insanity yet proposed, including that in my own text-book; and, that I may not be thought to be prompted by animus, I will make this the butt of my criticism. It is true that I have avoided in it some of the most obvious pitfalls into which my predecessors have fallen. I have not erected "mania," or excited conduct, which is a *manifestation* of insanity, into a *kind* of insanity, and placed it on a level with general paralysis, or *folie circulaire*, which include mania among their manifestations. No physician

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would propose a nosology including, in the same rank, as co-ordinate divisions, palsy and acute anterior poliomyelitis, or jaundice and cancer of the liver, or dropsy and mitral insufficiency; or dyspnœa and capillary bronchitis. It is evident that such pairs are not mutually exclusive; are not comparable on the same basis; cannot constitute co-ordinate parts of a working classification. The one element is a symptom, the other is a morbid change underlying this and other symptoms; and, without discussing the complicated problem of what is and what is not a symptom, it is clear that a classification so conducted is founded on sand, and cannot withstand the lightest breeze of criticism.

This pitfall I have avoided, but there still remain, in my classification, faults enough to condemn it, which are owing to neglect of the primary canon of classification that I have laid down. Look down the list, and you will find one kind distinguished by its causation (alcoholic insanity); another by its underlying morbid change (general paralysis); another by the nature of its associate (epileptic insanity); another by the course of the disease (*folie circulaire*); another by its predominant symptom (fixed delusion); another by the time of its origin (congenital imbecility); and another by the intensity of the disease (acute delirious mania). I have laid down the principle, which I submit is incontestable, that the primary division of any class must be made upon one basis of division, and one only; and here are no fewer than seven, all employed simultaneously to effect the partition! It is a misnomer to call such an arrangement a classification. It is a higgledy-piggledy conglomeration. It is not nearly as scientific as the arrangement of a library according to the size of the books or the colour of the bindings. These are perfectly legitimate modes of classification, for, though they do not go deep into the nature of the things classified, they are at least governed by a single principle. But, to parallel the arrangement of insanity which I have proposed, and which is not more confused and confusing than its predecessors, we must divide our library into cloth-bound, gilt-edged, green, illustrated, quarto, historical, and dogs'-eared books. A pretty classification, truly! Into such a quagmire have I been led by too sedulously cultivating that reverence for authority which it has always been my object in life to cherish!

The first canon of classification is, then, to divide each class upon a single principle, which may differ for different classes, or for successive divisions of a class; but for each process or act of division must not be departed from. Upon what principle, then, should the first division of cases of insanity be made? Upon one of those enumerated above, all of which are sanctioned by custom, or upon some new and hitherto unutilised principle? Again, reverence for authority, and desire to obviate opposition, impel me to choose a principle already in use.

Whatever principle is chosen, it must be one that can be applied to every case, and this qualification at once narrows our choice. It eliminates the principle of causation; since there are many cases in which the causation is uncertain, some in which it is unassignable. It excludes the pathologico-anatomical basis; since of this we are, in the majority of cases, ignorant. It excludes the basis of association; since, in most cases, there is no peculiar associate. It excludes classification by the course of the disease; since, in most cases, the course is unknown until it is finished. There remain the predominant symptom, the time of origin, and the intensity of the disease.

Of these three, it is obvious that the most fundamental is the time of origin of the disease, which would allow us to make a first division into congenital and non-congenital cases, and to continue the division of the latter, if we choose to do so, according to the year of life at which the insanity appears, or, more generally, into youthful, adolescent, mature, climacteric, senile, etc. But, if we make our first division into congenital and non-congenital, we are at liberty, if we so desire, to take other principles for the subsequent division of each class, without thereby violating any canon of classification. The first division, into congenital and non-congenital cases, we may accept, since it is a valid division; it is in accordance with traditional usage; and it is clinically convenient. It is not, however, of absolute validity, for many cases of occurring insanity, in which the certifiable degree of insanity does not appear until late in life, show some defect, short of this, which has existed and been evident from birth. Nevertheless, remembering that we are dealing with *cases* of insanity, it is a useful practical distinction to separate those in which recog-

nisable insanity exists from birth, or from as early an age as insanity can be recognised, from those in which the malady is not accepted as existing until later in life. Our first division, therefore, will be into congenital and non-congenital insanity. Each of these has to be further divided.

Congenital insanity may be divided, by a choice among the principles already enumerated, according to its degree or intensity, or according to its mode of causation (if known), or according to its associates. The degree may be either imbecility or idiocy, according as the patient is or is not of sufficient intelligence to safeguard himself from the common physical dangers, which beset all human beings from hour to hour and from minute to minute—from dangers of falling into pits, or into fire or water; of injuring themselves with cutting or other instruments; of collisions with moving bodies, and so forth; such as prevent us from leaving very young children alone. Having made this division, we may then make a co-ordinate classification by any of the remaining six principles; and the advantage of a classification by axes of co-ordinates is that, so long as one axis is governed by a single principle, the other may embrace more than one, without violating any canon of classification or introducing any element of confusion. Of this advantage we shall be glad to avail ourselves in subsequent groups, but for the present we need employ but one principle—that of association. Some of the associates are causal, no doubt; but they are introduced here, not as causes, but as associated conditions. Causes, regarded as causes, should be confined to the causation table, and should not, I think, be utilised for purposes of classification. A cause, which has ceased to operate, has ceased to exist; and it is not practicable to classify by non-existent qualities. For the purpose of classification, we should use, as far as possible, those qualities which can be ascertained by examination of the case. If features in the history are used for the purpose of classification, they should be features whose existence is beyond doubt, which causes seldom are. The classification of insanity of congenital origin will be as on page 678.

It may, of course, happen that the same case may be assignable to more than one column in such a table, but this does not vitiate the classification. An imbecile may have a traumatic deformity of the head, be hemiplegic, suffer from epilepsy and

deformity of the limbs. The arrangement remains valid. There is no cross-classification.

To non-congenital insanity the same general reasoning

	Microcephaly.	Mongolism.	Cretinism.	Hydrocephaly.	Hemiplegia.	Infantilism.	Dwarfism.	Giantism.	Epilepsy.	Congenital syphilis.	Deaf mutism.	Precocious.		Deformity.			Totals.
														Of head.			
												Maturity.	Senility.	Traumatic.	Non-traumatic.	Of limbs.	
Idiocy . .																	
Imbecility																	
Totals . .																	

applies; and the first task is to determine the principle on which the primary division should be made. For reasons already given, we are restricted to three alternatives. We may divide such cases according to the time of their origin, the predominant symptoms, or the intensity of the symptoms. The sketch, already made, of the classes that result from dividing according to the time of origin, shows that principle to be inappropriate. The time of origin is not always known. If known, it constitutes an arbitrary and artificial mode of division, whose classes are not distinguished from each other by any quality except that according to which the division is made. It is no index to other likenesses and differences. The object of a classification is to group like things together and separate unlike things. So that the principle that we choose should go deep into the nature of the objects classified, so as to secure that those grouped together shall be alike in many respects, and those separated unlike in many respects. The time of origin is not a good principle from this point of view, for it does not, as a rule, carry with it a large number of associated qualities. It does so in some cases, it is true, as the terms adolescent insanity, climacteric and senile insanity, indicate; but not every case of insanity occurring at a certain time of life is climacteric, and not every case occurring in advanced life is senile. Moreover, while the principle could easily be applied to *occurring* cases of insanity, it would often be impossible to

apply it to *continuing* cases; for in very many such cases the time of origin is not ascertainable; and, when it is ascertainable, it is not apparent. It must be sought for by rummaging in old records; it is not manifest from the clinical features of the case. On many grounds, therefore, time of occurrence is to be rejected as a principle of classification of non-congenital cases.

Classification by the predominant symptom is the most obvious mode, and the mode which is always the first to be adopted. It is on this primitive method that palsy, and jaundice, and dropsy, and mania were erected into classes of disease; but the mention of these classes indicates at once that the method is but a tentative and temporary expedient, useful in a primitive state of knowledge, but to be superseded as soon as the advance of knowledge permits. Has the advance in our knowledge of insanity proceeded far enough to admit of the abandonment of this principle of classification? I do not think it has. We cannot yet afford to dispense with it altogether, but its manifest imperfection should lead us to postpone its employment as long as possible; to use it for the minor divisions only, and to make our larger and more comprehensive classes upon some more comprehensive principle, which carries with it a larger number of implications, discriminates more differences, and associates more similarities. Where is this principle to be found? Of the principles already in use, but one is left unrejected, and we are compelled either to adopt this principle, and divide our cases according to the intensity of the symptoms that they present, or to seek some principle that is new and hitherto unused. Native conservatism shrinks from the latter alternative, until a fair trial has been made of the former; and, when the trial is made, it is gratifying to discover that the intensity of the insanity does constitute a very fair index to its nature, and carries with it a sufficiently large number of other attributes to justify its adoption as a principle of classification. The minor groups, within these larger classes, may well be characterised by the predominant symptom that the cases present.

Intensity can very well be distinguished into four grades, as follows:—

1. Fulminant;
2. Acute;
3. Sub-acute;
4. Chronic.

The last term is used, of course, in its secondary meaning of lack of intensity more than in its primary sense of lengthy duration, though the latter is not excluded.

This arrangement will be found to satisfy, to an unexpected degree, the requirements which J. S. Mill attaches to "a natural classification grounded on real kinds." "The problem is," he says, "to find a few definite characters which point to the multitude of indefinite ones," and a nearer approach to a solution of this problem is made by the selection of intensity, as the definite character, than would have been anticipated.

The first group, in which the intensity is at maximum,—fulminant insanity,—includes what has been always regarded as a true natural kind, *viz.*, acute delirious mania. This variety of insanity may rightly be called a disease. It is distinct in its features from every other disease. It runs a definite course, during the whole of which it is recognisable. Though its course is not certainly known, it is most likely allied to the specific fevers. In any scheme of classification of cases of insanity, it must form a separate group; and, in the scheme that is proposed, it finds a place prepared for it.

Acute insanity is less strictly demarkated; but, nevertheless, it forms a very natural kind of insanity. Acute mania, acute melancholia, acute suicidal insanity, acute religious mania, acute nymphomania, acute stupor, all resemble each other in being acute, that is in the intensity of the malady, and although they differ widely from one another in extreme and well marked cases, intermediate forms are much more frequent, in which the special characters of the different groups are blended or approximated. Acute mania and acute melancholia, or, as I prefer to term them, excitement and depression, are very frequently united. Every case of acute insanity is a potential suicide. In every case, we have to expect impulsive outbreaks of violence. In every case, refusal of food is expected, and in most it occurs. The same is true of masturbation and other morbid sexual manifestations. Every case, that reaches a sufficient intensity, becomes wet, or dirty, or both. In all cases, the same broad principles of treatment are applied. The whole group of cases forms, as has been said, a well characterised natural kind, in which sub-groups may be formed according to the most predominant feature, but all such sub-groups may well be included in a single class.

One objection, it is true, immediately presents itself. Such a group, so characterised, must include those cases of acute insanity which are the opening stage of general paralysis. It seems, at first blush, a violation of natural affinities to divide general paralysis, and to place its early stage in one class, while its later stages are relegated to a second, and perhaps a third. But the objections to this course may be very easily overcome, and the compensating advantages are great. It is often doubtful whether a case of acute insanity is one of general paralysis or not; but there is rarely any doubt as to whether a case can or cannot be called acute. In the first case, classification cannot be effected until the lapse of time has cleared up the diagnosis; but by estimating its acuteness, the case can be classified at once. The disadvantage of separating cases of general paralysis from one another, and apportioning them in different classes, is not only easily surmounted, but is attended by positive and great advantages, as I will show directly; and, in any case, it seems to me as important, and as useful, to be told that a case of acute insanity is one of general paralysis, and that we must look elsewhere for other cases of general paralysis; as to be told that the case is one of general paralysis in the acute stage, and that we must look elsewhere for other cases of acute insanity.

I have already declared that, having made the primary groups of non-congenital insanity according to the intensity of the symptoms, we are at liberty, and are even obliged, to characterise the subsidiary groups by the symptom that predominates. Applying this principle, we obtain the following sub-classes of acute insanity:

Stuporose;
Resistive;
Exalted;
Excited;
Depressed.

To these might be added, if it were considered expedient, a sexual and a religious sub-class. But as morbid sexuality runs through the whole class, and as morbid religious fervour is seldom a predominant symptom, it seems scarcely necessary to make special groups to contain such cases.

Now, to distinguish the general paralytic from the non-general paralytic cases, it is easy to make a new co-ordinate

axis, and to head vertical columns according to the information that we desire to collect. We shall then have all cases of the acute stage of general paralysis in one column, the exalted being distinguished from the depressed, while other cases of acute insanity will be in a separate column. The table will now assume the following form:

	General paralytic.	Non-paralytic.
Acute insanity { Stuporose . . .		
Resistive . . .		
Exalted . . .		
Excited . . .		
Depressed . . .		

It is at once obvious that this method of adding an axis of co-ordinates is capable of further extension. Some cases of non-paralytic acute insanity are primary; that is to say, they constitute the first indication of insanity in the subjects of them. Others are secondary, in that they are repetitions of a previous attack, or are incidents in the course of circular insanity, or are exacerbations of a previous state of more chronic insanity.

As already stated, the advantage of a classification by axes of co-ordinates is that only one of these axes needs to be divided on a single principle. The other may be used to indicate very various attributes of the objects classified. We may, for example, use this method to bring out the proportion of cases in which exist accompaniments of insanity, either bodily or mental, such as epilepsy, fever, hallucination, delusion, and so forth. We might, indeed, extend this axis so as to bring in causation, and any conceivable attribute or accompaniment of insanity that we desired to tabulate.

It is obviously expedient, however, to keep our tables within a moderate compass, and it is undesirable to furnish the same information twice over, except in an entirely new and useful combination. Without denying the interest that would attach to the display of the type of insanity that is associated with certain causes, I think that this information, if furnished at all, should be furnished in a separate table, and that the table of acute insanity should be limited as follows.

		General paralytic.	Non-paralytic.					Accompaniments.			
								Bodily.		Mental.	
			Primary.	Recurrent.	Alternate.	Exacerbate.	Total.	Epilepsy.	Fever.	Hallucination.	Delusion.
Acute insanity	Stuporose .										
	Resistive .										
	Exalted .										
	Excited .										
	Depressed .										

By this method, several important objects would be attained. We should obtain statistics of the relative frequency of the several types of general paralysis, information which, if obtained for the last twenty years, would have enabled us to follow the change of type which has occurred in this disease. The concomitants of insanity would be taken out of the causation table, to which they do not properly belong, and be placed among their natural affinities.

We are not compelled by any canon of classification to divide cases of the next class—sub-acute insanity—upon the same principle as those of acute insanity. Nevertheless, we shall find it expedient to do so; and in this group we may go into further detail, for the number of symptoms that become predominant is greater in sub-acute than in acute insanity. We may therefore divide sub-acute insanity as follows:

Sub-acute insanity . . . . . .
- Neurasthenic.
- Stuporose.
- Exalted.
- Excited.
- Depressed.
- Suspicious.
- Persecuted.
- Obsessed.
- Perverted.

Objection may easily be made to this table. A patient may

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be both exalted and excited; both excited and depressed; both suspicious and persecuted; and in so far the table is faulty. But the answer is two-fold. In the first place, the *predominant* symptom must govern the classification, and it is rarely that both features are equally predominant; and in the second, where no predominance can be distinguished, the case may be marked, without confusion, on the line between the categories, or additional categories could be provided, if it were thought desirable, of the excited-exalted and the excited-depressed.

It would be easy to make the table more detailed. The depressed cases could be divided into the hypochondriac; the infested, in which some parasite is supposed to inhabit some part of the body; the personally changed, in which the bowels are supposed to be stopped or the brains taken out, etc.; the poverty-stricken; the unworthy, including sinners and criminals, so self-accused; the incapable and impotent; and so forth. Although the information thus furnished would be of interest and value from a scientific point of view, and although tables for the use of the Association alone might well be made on such a plan, it would be injudicious to burden the tables, to be recommended to the official authorities, with non-essential details.

Similarly, the information given in the co-ordinate axis could be rendered more detailed, and the hallucinations apportioned among the senses affected; but to this the same reasoning applies. The information would be interesting and valuable for scientific purposes, but whether it would appear to the authorities of sufficient importance to be embodied in their reports, is rather a matter for them to determine.

The division of the chronic cases will be only slightly different from that of the sub-acute. Neurasthenia will come out, as will stupor, for neither of these affections can be regarded as of so little intensity as to justify their relegation to the chronic class; while in their stead will be a sub-class of simply defective cases, in which the predominant symptom is a mere deficiency of intelligence, feeling and conduct, unaccompanied by any more positive manifestation. It is true that many such cases exhibit from time to time outbreaks of excitement, and other positive manifestations of insanity, and, if classified during such intervals, they would be placed in another class; but such cases, during their quiescent as well as in their other

TABLE IV.—*Forms of Non-congenital Insanity.*

			General paralytic.	Non-paralytic.							Associated conditions.								
					Secondary.						Mental.			Bodily.					
				Primary.	Recurrent.	Alternate.	Exacerbate.	Continuing.	Summary.	Total.	Hallucination.	Delusion.	Mnemonic defect.*a*	Epilepsy.	Fever.*b*	Myxœdema.	Phthisis.*c*	*c*	*c*
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Fulminant (ac. delirious mania)		1	—	1	—	—	—	—	1	1*d*	1	—	—	—	1	—	—	—	—
Acute	Stuporose	2	—	2	—	—	—	—	2		—	—	—	—	—	—	—	—	—
	Resistive	3	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
	Depressed	4	12	11	2	—	—	—	13		2	18	—	—	—	—	—	—	—
	Excited	5	5	8	—	—	2	—	10		4	10	—	2	—	—	—	—	—
	Exalted	6	—	—	1	—	—	—	1		—	—	—	—	—	—	—	—	—
		7								26*e*									
Sub-acute	Neurasthenic	8	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
	Exalted	9	6	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
	Excited	10	—	—	—	1	23	7	21		6	15	—	5	—	—	—	—	—
	Depressed	11	4	—	3	—	10	3	16		—	16	—	—	—	—	2	—	—
	Suspicious	12	—	1	—	—	—	—	1		—	1	—	—	—	—	—	—	—
	Persecuted	13	—	2	—	—	—	14	16		15	16	—	—	—	—	—	—	—
	Obsessed	14	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
	Perverted	15	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
		16								54*f*									
Chronic	Defective	17	5	—	—	2	230	54	286		—	37	5	32	—	—	—	—	—
	Exalted	18	2	—	—	—	5	8	13		—	13	—	—	—	—	—	—	—
	Excited	19	—	—	—	—	13	2	35		8	30	—	7	—	—	—	—	—
	Depressed	20	1	—	—	—	—	18	18		—	18	—	—	—	—	—	—	—
	Suspicious	21	—	—	—	—	—	2	2		—	—	2	—	—	—	—	—	—
	Persecuted	22	—	—	—	—	—	48	48		40	48	—	—	—	—	—	—	—
	Obsessed	23	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—
	Perverted	24	—	—	—	—	—	5	5		—	—	—	—	—	—	—	—	—
Totals			26	25	6	3	281	171		407*g*	76	222	7	46	1	—	2	—	—
			486							486*h*									
Grand total insanity			512																

a. Defect of memory so great as to be unmistakably morbid. *b*. Fever is not to be registered when it can be attributed to intercurrent disease. *c*. Other associated bodily conditions, being not intercurrent disease, but organically connected with the insanity. *d*. Total acute delirious mania. *e*. Total acute insanity (non-paralytic). *f*. Total sub-acute insanity (non-paralytic). *g*. Total chronic insanity (non-paralytic). *h*. Total non-paralytic insanity.

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stages, would be marked in the exacerbate column of the co-ordinate axis. For the proper allocation of such as are permanently defective only, and never exhibit more positive manifestations, we must add to this axis another column, of "Continuing" insanity, which will be found useful for other sub-classes also. The cases in which the defect is so slight that the patient might well be at liberty, and is allowed his parole, in the intervals between his outbreaks of excitement, but is detained under care because of their frequency and uncertainty of onset, can be entered in the column "Recurrent," whether at the time of the census he is excited or no, his sub-class or class being changed or not accordingly. Those who are permanently excited will, of course, be ranked in their proper class, and filed as "Continuing."

The only other item that need be referred to is the sub-class "Perverted," which appears in the previous table also. By pervertion I mean to be understood all cases of disorder of instinct, whatever the instinct that is affected. It would include disorder of the instinct of self-preservation, as in claustrophobia and agoraphobia; as in suicidal conduct without manifest previous depression. It would include disorder of the reproductive instincts, as infanticidal, and abnormal sexual conduct. It would include disorder of social conduct, as kleptomania; and any other disorder of instinct which appeared to be the predominant manifestation of the insanity. The sub-class could, of course, be further divided in the table if this were considered expedient.

After what has been said, the table needs little explanation. All cases of general paralysis would of course be marked in the first column. The types would be indicated by the sub-classes, the stages by the classes, and the total would be given at the foot of the column. Thus, more information would be given about general paralysis than has been hitherto afforded.

Cases of first attack are distinguished from secondary cases, and the intensity and type of insanity in each case is indicated. Cases of recurrent insanity, of circular insanity, of mild insanity subject to exacerbation and of the same class not so subject, are distinguished, classified into types, and the sub-totals and totals given. The total of acute delirious mania is given on the first line, and that of acute non-paralytic insanity on the seventh. The total of epileptics is given at the foot of the

appropriate column. If anyone is so strangely constituted as to desire to know the number of cases of "mania" or "melancholia" he can arrive at it by adding the appropriate summaries in column 7 of lines 5, 10, and 19, or 4, 11, and 20. The chief defect is, perhaps, that the total of paranoiacs cannot be seen at a glance, but it can be readily arrived at by adding the summaries, in column 7, of lines 13 and 22. Moreover, the table distinguishes primary from secondary paranoia, which no table has done before.

The following merits may fairly be claimed for this table:

1. It satisfies the requirements of a valid classification; that is to say: first, it covers the whole field—it includes all the objects that it is sought to classify—it finds an appropriate place, and but one appropriate place, for every case of insanity. It does not require the aid of a rubbish-heap, entitled "dementia," to receive a huddled crowd of unclassified cases. Second, it associates things which are like, and separates those which are unlike; and third, it does not include the same case at the same time in more than one class of the same rank. I know of no other classification of cases of insanity for which these claims can justly be made.

2. It seems to me to satisfy the requirements that I have specified as needful in a classification of cases of insanity. It needs no profound knowledge for its application. It is as easy for the novice as for the expert, for the pathological microscopist, or the stock-breeding superintendent, as for the clinical alienist. It needs no skill in diagnosis. It rests upon no questionable hypothesis. It goes as far in drawing distinctions as the general state of knowledge justifies, and yet leaves no heterogeneous group undissected. It discards terms that are obsolete and ambiguous, without introducing fancy titles.

3. It gives more information, and more detailed information, than any table hitherto proposed for the purpose, without increasing appreciably the labour of compilation.

4. It has a practical as well as a scientific value. Comparison of total primary non-paralytic insanity with total non-paralytic insanity affords a corrective to the recovery rate. Comparison of total acute insanity with total insanity affords an indication of the proper ratio of attendants to patients. Comparison of total acute insanity with total sub-acute and chronic affords some notion of efficiency of treatment.

5. Lastly, it is eminently modifiable. If more detailed information is needed, sub-classes can be sub-divided or added, and new columns embodied. If difficulties arise in furnishing the information necessary to fill out the table, columns can be omitted, or sub-classes united.

TABLE VI.

In spite of Dr. Stewart's recent communication to this Journal, I think it superfluous to argue, in these latter days, that insanity is the result of a certain stress acting upon a certain organisation. I do not see how this statement can be controverted, if it is rightly understood. It appears to me self-evident, and I shall, therefore, not expend time and space in endeavouring to establish it; but as it appears that it is not always understood, I will try to state it as plainly as I can.

My position is that insanity is a defect or disorder of the mode of working of the highest nerve regions; and that, if these structures perform their duties in an imperfect or disorderly manner, it is because, either their original constitution was imperfect, or their working is vitiated by some interference from without, or both. For my own part, I cannot see that any other source of derangement is possible; and I look in vain in the list of causes put forward by this Association, and by other authorities, for any cause that cannot be referred to one of these two classes. In congenital insanity, the first cause alone is operative. The original constitution of the organism is at fault. In non-congenital insanity, the whole fault may be in the intensity of the stress to which the organization is exposed; as in mania *a potu*, and the delirium of specific fever. But, in most cases of non-congenital insanity, the two causes co-operate. The organisation, faulty though it be, is sufficiently well constituted to perform its functions efficiently as long as the performance is easy, or as long as the organisation remains up to a certain standard. But should this standard become lowered, either from the ordinary wear and tear of life, or from the operation of depreciating causes; or should adjustments be attempted which are beyond the strength of the organisation to effect; then disorder will occur; and in such case the disorder will be partly due to the inherent defect in the organisation, and partly to the experience under which it breaks down.

Such experience I call a "stress." To apply this term to the original defect of organisation, as is done by the Statistical Committee, appears to me the degradation of a useful term, and the source of unnecessary confusion.

If these be the two distinct causes or conditions of insanity, then it is surely advisable that they should be kept separate; and it is obvious that they must, if the view that I take is correct, form the two primary classes in a classification of causes. The Committee, powerful enough to break the shackles of the old statistical tables in so many other respects, remain in this table in the old fetters. They still retain the primary division into mental causes and physical causes.

For this primary division into mental and physical, I propose to substitute defective organisation and stress; and, taking first defective organisation, it is at once apparent that such defect may be evident and plain to view in the subject of the investigation, as when he is microcephalic or exhibits stigmata of inherited syphilis; or it may be inferred, either from the existence of some defect, such as insanity or epilepsy, in one of his parents; or from some other circumstance in his personal or family history. The first division of defective organisation that we make is, therefore, according as the defect is manifest or is inferred.

The manifest defects of original organisation are either congenital, or appear in very early life; and, when they are accompanied by insanity, the insanity appears equally early. They may therefore be utilised to determine the arrangement of cases of congenital insanity; and, as they have already been utilised for this purpose, there is no valid reason for repeating the enumeration in a causation table. We will therefore discard them from our purview for the present purpose, and confine ourselves to the consideration of that defective organisation which cannot be directly perceived, but can merely be inferred.

The inquiry is consequently restricted to this question:—What are the circumstances which justify us in inferring that the organisation of any individual is defective in such a way as to predispose him to insanity? Or, if the term "predispose" is objected to, then the question is—What are the circumstances which justify us in inferring that the organisation of any individual is so defective that he may become insane under

the operation of stresses which would not produce insanity in a normal person?

The first of these circumstances is sufficiently obvious. It is the fact that the individual *has* become insane under these conditions. It is for such persons that the table is needed: it is for them that it is intended to be used. Consequently, when we find, in the antecedents of such a person, circumstances which *might* have deteriorated the grade of his organisation, we are justified in inferring that it is likely that they did so. But we are not justified in inferring that it is certain that they did so. We cannot say for certain that such a circumstance, as the existence of insanity or alcoholism in the parent, does deteriorate the organisation of the offspring, until we trace the mode of causation, or until we justify the inference by a large collection of statistics. When we find that insanity in a son was preceded by insanity in his father, we are justified in inferring the likelihood that a defect in the organisation of the father, which allowed him to become insane under the action of stress, was transmitted by inheritance to the son. But we are not justified in inferring the certainty of such transmission. It may be that a normally constituted father, after the conception of the son, was subjected to stress of such severity as to produce insanity even in his soundly constituted organisation; and that the soundly constituted son was subjected, in his turn, to a similar stress; so that there would, in such a case, be no connection whatever between the insanity of the father and that of the son. The suggestion is by no means fanciful. After begetting a son, the father may acquire syphilis, and may in consequence become subject to general paralysis. The son also may acquire syphilis, and living, like his father, a strenuous life, may also become paralytic. But it would be a wild hypothesis to suggest that the general paralysis of the father was bequeathed to his son. The facts that are gathered in this so-called causation table are not facts of causation therefore—are certainly not necessarily facts of causation. They are merely facts of sequence, from which, when the collection is sufficiently large, causation may be inferred with some confidence. Each heading introduced into the table is not a statement of causation, but a suggestion of an hypothesis. It is merely a mode of tendering advice that such statistics should be collected. When we place in the table parental alcoholism, we must be

understood not to assert that parental alcoholism is a cause of defective organisation in the offspring, but merely to suggest that it is desirable that statistics of parental alcoholism in the insane should be collected, in order that we may discover, by comparison with the alcoholic parentage of the sane, whether parental alcoholism may safely be inferred to be a cause of insanity or no. It is quite justifiable, therefore, to introduce into the table factors whose influence in producing insanity is very doubtful, in order that our doubts may be removed. Their introduction into the table implies, not that we know, but that we desire to know, whether they possess this influence or not. All we need require of the factors that we insert in the table is that there is a *primâ facie* likelihood that they may indicate defect in the organisation of the persons, with regard to whom the inquiry is made. What factors, then, shall we include?

We may fairly infer defective organisation in any individual if we find his parents, or either of them, defective. The inference is not certainly valid; but it is likely. The parental defect is not proof of defect in the offspring, but it is evidence of such defect. There is enough *primâ facie* likelihood to warrant further inquiry, which is the object for which statistics are collected, and for which these tables are framed. Parental defect may, therefore, go into the table; and, for the same reason, defect in the ancestry, direct or collateral, beyond the parents, finds a rightful place. Moreover, it is legitimate to inquire whether the parental defect is in the father or the mother; whether the defect in the remoter ancestry is on the father's or mother's side.

The next question is: What defects should be included in the inquiry? What defects in the parentage or ancestry have we reason to suppose may impair the organisation of the offspring? Insanity, certainly. Epilepsy also. Alcoholism has a double right to admission, both as indicating an imperfect organisation in the victim, which may be transmitted to the offspring; and as indicating the existence in the parent of a poison, which may, for ought we know, have a direct effect upon the sperm or germ. Phthisis and syphilis should also be included, since there is abundant evidence that the offspring of persons affected with these diseases are defective. There is strong evidence that senility in either parent is a cause of

deterioration of the offspring; and it is possible that juvenility also may have this effect; both these should therefore be included. Defective organisation in an individual may *primâ facie* be inferred from the existence of defect in other offspring of the same parents, especially in those near to him in time of birth. The integrity of his brothers and sisters should therefore be included in the inquiry.

It has often been alleged that consanguinity in the parents, even when both are normally constituted, is a cause of defective constitution in the offspring. The evidence is conclusive for such very close consanguinity as may be produced in breeding the lower animals; but, for such slight degree of consanguinity as obtains in civilised communities of the human race, it is very far from conclusive. It is, however, a fair subject for inquiry; and, since the inquiry is easily made, we may insert this query into the table. While we are making this inquiry, we might also include exsanguinity, or the union of parents of different race; though, as there are no statistics available of the proportion of such unions to the total of marriages, such an inquiry is not likely to yield useful results.

Lastly, there is a *primâ facie* likelihood that children, who are prematurely born, will be imperfectly organised.

The table will then be as follows:

			Parents.		Ancestry.	
			Father.	Mother.	Father's side.	Mother's side.
Defective organisation inferred from	Parental	Insanity.				
		Epilepsy.				
		Phthisis.				
		Syphilis.				
		Alcoholism.				
		Senility.				
		Juvenility.				
		Consanguinity				
		Exsanguinity.				
	Premature birth.					
	Fraternal or sororal	Imbecility.				
		Insanity.				
		Epilepsy.				
		Alcoholism.				
		Congenital syphilis.				
		Other defect.				

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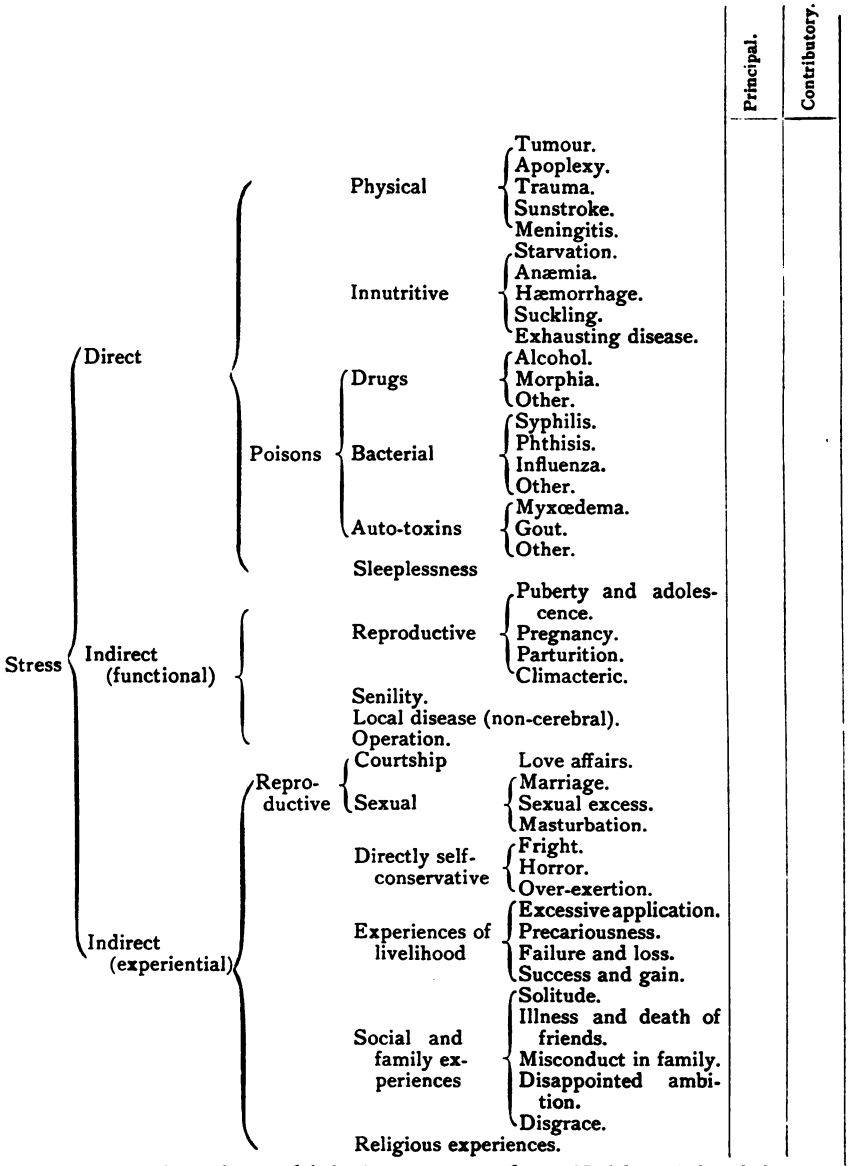
The stresses to which the organisation, whether normal or defective, is subject, and whose incidence tends to produce insanity, fall into three very natural divisions. First, there are those influences which directly affect the structure or composition of the nerve tissue by immediate action upon it, such as physical injury, innutrition, and poisons. To these may be added sleeplessness, which is most conveniently included among them, though its right of admission to the group might be contested. Each of the various modes of injury is producible in several ways, and each of these ways may properly be made into a separate sub-class or heading.

The stresses of the second division are those to which the brain is subject indirectly, from its inability to cope with and control bodily changes. The function of the higher regions of the brain is not merely to actuate conduct, but also to co-ordinate and harmonise all the internal processes of the body; just as the function of a Government is not only to regulate the relations of the nation with other nations and the world at large, but to provide for police, the administration of justice, and other functions within the realm. And, just as a Government may be paralysed by the assassination or the prostration by influenza of its chief members, which is comparable to the action on the brain of direct stresses; so its authority may be suspended or superseded, in part or wholly, by rebellion and revolt within the nation. The latter disorder is paralleled by the stresses of this second kind, which include the internal commotions produced by puberty and adolescence, by pregnancy and parturition, by the climacteric, and by local as well as by these general sources of disorder.

Lastly, a Government may be overthrown, not only by revolt from within, but by external war; and similarly, the controlling and regulating function of the brain may be disordered, not only by commotion within the body, but by harmful experiences arising in the department of conduct, in the traffic between the individual and his circumstances. Such experiences may arise in any of the departments of conduct—in experiences of reproduction, of self-conservation, of family and social life, or of religion; and the stresses may conveniently and properly be divided according to the department of experience in which they arise.

Thus, stresses may be divided primarily into the direct and the

indirect; while the latter may be redivided into the functional and the experiential. The table will then assume somewhat the following shape:—



Upon the plan which I propose, then, Table VI is divided into two tables, one of which collects evidence of original

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defect of organisation, the other of stress that has acted on the organisation, whether defective or not. Compared with the table of the Committee, the chief difference is that this method makes the primary division of causes into defective organisation and stress, instead of into mental stress and physical stress, the latter including defective organisation, which is not, in any proper sense of the word, a stress at all.

In the table of defective organisation, the adoption of this term and of this method, enables us to include inquiry into circumstances that do not appear in, and could scarcely be appropriately introduced into, the table of the Committee, and yet which it is desirable should be ascertained. Such circumstances are the senility, the juvenility and the consanguinity of the parents. These are not matters of inheritance. They are not qualities that can be hereditarily transmitted. But they are qualities in the parents which may well have an influence on the grade of organisation of the offspring, and which certainly should be included in a statistical inquiry into the causation of insanity. The existence of fraternal or sororal insanity, or of the other defects in the brothers or sisters that are tabulated, are certainly of great importance, yet it would be manifestly incorrect to speak of them as hereditary in the patient under investigation. They are evidence—not proof, but evidence—of defective organisation in him, and therefore should be included in the inquiry, but it is difficult to see how they could be appropriately brought into it except by the means which I propose.

For the division of mental stress into sudden and prolonged, it substitutes a division according to the department of experience in which the stress arises. The inclusion of sexual excess and masturbation in this group of stresses, rather than among the functional or the direct, may appear inappropriate, but it is obvious that these stresses arise out of conduct, and therefore are properly included in the department of experience. The table of the Committee has a department for physiological defects and errors, in which the term physiological appears to bear a peculiar meaning; for, while physical over-exertion is included as a physiological error, mental exertion is excluded from the group; and disease of all kinds, which appears to have a fair claim to the title of physiological error, is also excluded. Under traumatic stresses their table includes "injuries" as a

single heading; but, surely, a blow on the head is causal in a different mode and in a different sense from a railway smash crushing the legs only? And surely too, it is important under "operation" to distinguish trephining from double oöphorectomy? Again, some "lesions of the brain" may surely be included also in another class, among "injuries," others among "operations," others under "syphilis," and so forth.

I should preserve the distinction made by the Committee into principal and contributory, or predominant and subsidiary, stresses. It is certainly more easily appreciated than that into predisposing and exciting. Arranged on this plan, it will be found that the principal or predominant stresses preponderate at the upper part of the table, and the contributory or subsidiary stresses towards the bottom. That is to say, causal efficiency is greatest among the direct stresses, least among those which arise out of experience. This does not necessarily mean that the number of cases in which the cause can be identified follows the same rule.

"Previous attacks" are abolished, as I think they should be, from the causation table, together with general paralysis, and appear more appropriately in Table IV.

While it is a matter of small importance whether any specific heading is admitted to or omitted from the table, and not of paramount importance whether the stresses are arranged upon the plan that I propose or on that proposed by the Committee; it is, I maintain, of very great importance that the two objects of inquiry—the character of the original organisation, and the character of the stress that acts upon this organisation—should be kept as distinct in the tables as they should be kept in our minds. Inheritance is a cause of insanity when only it is responsible for an imperfect organisation, unduly obnoxious to the disturbing action of stress. Now, inheritance is not the only cause of such imperfect organisation, and the other causes are omitted from the table of the Association. Moreover, the influence of inheritance can never be directly observed; it can be inferred only, and it is surely better, when we make a guess, to call it a guess, and not to put it down as an ascertained fact. By the method which I propose we distinctly avow the object of these tables of causation. The object is not, as it misleadingly appears to be, both in the existing table, and in the table proposed by the Committee, to tabulate causes of insanity that are

known to have produced insanity in the patients whose cases are tabulated. We are rarely able to indicate with any certainty what the *vera causa* may be in any given case. We find, perhaps, conditions that we know, or strongly suspect, may tend to produce insanity; and, since the patient is insane, we infer that in him they did produce insanity. But our conclusion is an inference only. We may not "conclusively presume," as the lawyers say, that a condition which may produce insanity, and which is present in a case of insanity, did in fact produce the insanity. But although we may not do this, and although we gain no more information about any individual case by including it in a causation table, we do, by the accumulation of many cases, gain very valuable corroboration or contradiction of our hypothesis that such and such a condition is causative of insanity. Let it be understood and definitely stated that this is the object of the tables—that they are not intended to be statements of what we know to be causes of insanity; but fishing inquiries as to whether certain conditions, which we suspect to be causes of insanity, are so in fact or not. Such questions we hope to determine by the aid of the statistics accumulated in these tables.

Stress Again. By CHARLES A. MERCIER, M.B.

DR. R. S. STEWART'S statement, in his paper on "Wages, Lunacy, and Crime," that he used the term "stress" *in the ordinary sense of the term* did not escape my attention, and naturally led me to suppose, until I read the subsequent part of his paper, that he meant to use the term in the sense in which it was introduced into psychiatry; and it was his departure from this "ordinary" sense which led me to make my expostulation. I desire to deprecate any notion in the mind of Dr. Stewart, or of anyone else, that I am pursuing this subject from any motive except that of clarifying our terminology from ambiguity and uncertainty. For one of my books I have chosen, as a motto, Huxley's confession: "The whole of my life has been spent in trying to give my proper attention to things, and to be accurate, and I have not succeeded as well as