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Part I.—Original Articles.

Amentia and Dementia: a Clinico-Pathological Study.

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GROUP I.—PRIMARILY NEURONIC DEMENTIA.

CLASS (D).

Premature Dementia (*Dementia Præcox*).

The present class, to which is here applied the term "premature dementia," differs from the three classes of primarily neuronic

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dementia, which have already been considered, in the fact that, owing to its re-cognition by Kahlbaum and to the attention drawn to it by Kraepelin, its types and their symptomatology, even to the minutest detail, have been described and detailed in an extensive literature. It is not the purpose of this paper to give a complete historical account, or even a general description, of this variety of dementia; the object of the writer is rather to treat it as the compeer of the other three classes of primarily neuronic dementia which have already been dealt with. He therefore proposes to limit himself to a general reference to those especial details of symptomatology which for his purpose are of importance, and to certain generalisations on the entire subject of premature dementia. Where he agrees with the observations and conclusions of previous writers he does not claim priority by omitting references to these, for he takes it for granted that readers of the present paper are necessarily familiar with, at any rate, the more important literature on the subject, and where he differs from present opinion he trusts that the general trend of this communication will uphold the views he expresses. Such a course is the only possible one to adopt in a contribution which has already become of inordinate length. The relative baldness of the descriptions, in view of the immense literature available, is thus intelligible, and he hopes excusable, for his account of the variety of primarily neuronic dementia at present under consideration is merely intended to run *pari passu* with those of the preceding classes, which classes are, in his opinion, equally important from the psychiatric aspect, though they have hitherto not received adequate recognition.

The term "dementia præcox" has of late years been employed so extensively with reference to almost every type of insanity occurring between puberty and maturity, and so much doubt therefore exists as to its exact connotation, that the writer has considered it desirable to here make use of the alternative cognomen of "premature dementia."

Many cases of adolescent insanity, with relatively little mental confusion, recover sufficiently for discharge either as "recovered" or to the care of their friends, and are then often able, on a lower mental level, for long periods of time, or permanently, to sustain without injury the ordinary environment of the sane. Other cases, which are really examples of high-

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grade amentia of relapsing type—though, except for the absence of mental confusion, they bear a close resemblance to certain of the confused cases—also recover, at any rate for the time. Further, a few examples of the "hysteria" class of high-grade amentia, which exhibit cataleptoid phenomena but no mental confusion, also recover, and thus even the grave symptom-complex commonly referred to as "catatonia" is credited with a number of recoveries. The first only of these types furnishes examples of mild premature dementia, but cases belonging to all three are often referred to as "recoveries" from dementia præcox, and thus certain writers object to the employment of the term "dementia" to connote a symptom-complex which furnishes a quota of cures.

As will be seen later in this section, the writer is strongly of opinion that uncomplicated examples of premature dementia (in which the preliminary mental confusion is not precipitated by a primarily toxic, and therefore removable, cause) invariably exhibit a degree of mental confusion during their initial phases, which is roughly proportionate to the grade of dementia which ensues, and that recovery without some grade of dementia does not occur. He therefore employs the term "premature dementia," as a co-ordinate of the terms "mature," "presenile," and "senile or 'worn-out' dementia," to describe the cases of primarily neuronic dementia which occur during the period of life which is limited by puberty on the one hand and maturity on the other, and which exhibit during their initial phases a certain, and often a severe, grade of mental confusion.

The class of premature dementia, as thus defined, includes all cases which undergo a greater or lesser degree of neuronic dissolution, with consequent stationary dementia, between the ages of puberty and maturity.

A large proportion of these cases break down, not only under the influence of the metabolic disturbances which are associated with the former and "critical" period of life, but also, and probably more often, under the mental "stress" involved in the general change in the functions of the cerebrum from the mere acquisition of information to the performance of the higher processes of mind—namely, the orderly aggregation and selection of facts, the co-ordination of these into suitable sequences of ideas to enable judgments to be evolved, and the turning of acquired information to practical uses—which change of cerebral

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function also commences about the period of puberty. Under this "stress," cases possessing higher cortical neurones of deficient durability go to the wall.

It is thus readily intelligible, in fact obvious, that this class must include, not only cases of relatively high mental capacity, whose cerebra have, by over-study and intense application, been strained beyond their breaking-point, but also numbers of degenerates who, under the influence of "stress," which would be sustained without injury by normal subjects, have similarly over-strained what, in this instance, are deficiently durable cortical neurones.

The former type of case occurs, not only in asylums, but also in the outside world. It is, for example, common knowledge that only a proportion of the brilliant students of medicine, who, during their course of study, carry all before them, attain in later life to eminence, this term being employed in a scientific rather than in a popular or a pecuniary sense. In the remainder, over-strain has reduced their mental powers to a more ordinary level, and though of, perhaps, average intelligence, "push," and business capability, they are nevertheless, in a strict sense, examples of premature dementia. This condition is not, however, limited to individuals of unusual mental power. The writer is not aware that he is stating anything original when he remarks that he has seen many examples of premature dementia in men in the possession of ordinary mental powers, who, by dint of exceptional perseverance, have obtained the more coveted medical qualifications, and who afterwards exhibit, not more, and often less, ability than is possessed by quite ordinary individuals. He is convinced that such cases are true examples of premature stereotypism or premature dementia, which has developed under the influence of mental strain that could not be submitted to by these individuals without irretrievable damage to an appreciable number of their cortical neurones; and that the phenomena referred to are not, as is so commonly stated, due simply to the absence of what is often described as a "capacity for affairs," or a practical, in contra-distinction to a theoretical, mind.

Between such cases and those who require asylum *régime*, and often develop enough dementia to require their permanent detention, there is merely a difference of degree.

In the case of definite degenerates, the onset of insanity,

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followed by premature dementia, is more readily intelligible, and is, in fact, appreciable even to the layman: and during the past few years the question of the care and control of the "feeble-minded" has attracted much attention. It is unnecessary, therefore, from its general aspects, to enter into a discussion of this subject, though a few remarks on the origin and course of the particular type of case which commonly drifts into asylums is, perhaps, not out of place. Of such patients, some, after leaving school, pass from situation to situation, becoming duller after each change, either until no employer will keep them, or until definite symptoms of insanity supervene; others, under the influence of stronger minds, leave home for the large towns, or even for distant countries, and return some years later as premature dements; others, by morbid introspection and the (in many instances secondary) development of masturbation, acquire perverted sexual and hypochondriacal ideas, which undermine their powers of application and result in their isolation in asylums; etc. In other cases the resistance of the cortical neurones is exceeded by intemperance in alcohol, and, in the case of girls, married or unmarried, by the "stress" involved in ordinary or illegitimate pregnancy and confinement. Any variety of mental or physical "stress" may, in fact, act as the last straw, or precipitating agent, in determining the onset of an attack of insanity, and the question of whether or not enough dementia for the permanent detention of the patient supervenes, depends entirely on whether a sufficiency of cortical neurones have, or have not, undergone irretrievable damage.

Many cases of the kind recover sufficiently to gain their discharge from confinement, and return to their former environment with mental powers of a feebler order than they possessed before their attack of insanity. It is needless to state that such cases usually in the course of time return to the asylum, and, according to circumstances, repeat the process or remain as permanent inmates with dementia. Such cases, it may be remarked, are not to be confounded with examples of true recurrent insanity who do not develop dementia, but return again and again to their accustomed avocations with unimpaired mental powers, commonly, it is true, when in later life retrogression of the cortical neurones occurs, to become permanent inmates with, however, relatively little dementia. The remainder of the cases under consideration do not recover, but develop

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either a mild or a moderate degree of dementia, remaining in this condition, owing to the absence, whilst under asylum *régime*, of enough "stress" to produce further mental deterioration, until normal retrogression or "wearing out" of the cortical neurones ensues. Such cases differ from the types of pure high-grade amentia referred to in the second part of this paper, solely in the fact that the latter still possess cortical neurones in a generally unimpaired structural condition, whereas the cerebra of the former have undergone a greater or a lesser degree of dissolution.

It is not the purpose of the writer to deal in an exhaustive manner with the preliminary symptomatology of premature dementia, as the subject of the general relationship of mental confusion to dementia has already been considered at length in a previous section (*Journ. of Ment. Sci.*, July, 1906, pp. 427–490). It is, however, necessary for the purpose he has in view to introduce certain general remarks on this subject in order to emphasise some of the especial characteristics of the dementia of prematurity.

Mental confusion, in the experience of the writer, exists to a greater or a lesser degree in all premature cases which are about to develop dementia, provided that the psychic state of the patient is not such (*e.g.*, in certain cases of deep stupor, etc.) as to preclude, for the time at least, the exhibition of this symptom-complex. He has, in fact, observed, as his experience has year by year increased, that the proportion of cases exhibiting negative motor symptoms, in which it is not possible to determine the existence of mental confusion, has steadily decreased as he has paid more and more attention to such motor phenomena as the patient has been capable of originating. It has been a relatively rare experience to meet with cases of stupor which, on recovery, have been able to clearly describe what has happened whilst they were in a condition of lethargy, during which they were unable to initiate any motor response, even to intensely painful stimuli: and such cases have hitherto been examples, not of premature dementia, but of recurrent or relapsing insanity. He thus feels justified in expressing the opinion that mental confusion exists to a greater or a lesser degree in the preliminary stages of all cases of premature dementia. Further, he considers that mental confusion is a symptom of especially grave import in cases of premature insanity, and, except in the small proportion of cases in which

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primarily toxic and, therefore, removable causes (*e.g.*, intemperance in alcohol and puerperal toxæmia, etc.) exist, is invariably the precursor of a degree of dementia which is roughly proportionate to the amount of mental confusion present. He is thus of the opinion that the exhibition, with the above-mentioned restriction, of mental confusion by cases of premature insanity is of such significance as to justify an unfavourable prognosis, and at the same time to remove the most important objection to the employment of the term "premature dementia," or "dementia præcox," provided that this cognomen be employed, as here, solely to denote cases of premature insanity which exhibit a more or less marked degree of mental confusion as part of their "acute" or "recent" symptomatology.

Whilst premature dementia, from this particular aspect of preliminary symptomatology, falls into line with the other classes of primarily neuronic dementia which have already been considered, it differs from these in the frequent exhibition of such characteristic phenomena, that it is not a matter for surprise that its study should have vastly overshadowed, both in extent and in detail, that devoted to these other varieties, with the sole exception, perhaps, of that particular well-known symptomatological type now usually designated by the name of "Korsakow's symptom-complex."

Though the necessary references to these characteristic phenomena will be made under the appropriate sub-classes into which the cases of premature dementia under consideration will for convenience be grouped, the writer purposes to here interpolate a few remarks which are intended to suggest a probable reason for their especial exhibition by the cases belonging to this class.

This is, in brief, in the opinion of the writer, to be found in an immature condition of the centres of association of the cerebrum. In cases belonging to the previous classes of "senile," "presenile," and "mature" dementia, whatever be the respective degrees of involution or dissolution which later on result, the centres of association, both lower and higher, have by frequent repetition necessarily acquired a capacity for relatively stable neuronic groupings as the physical basis of the psychic processes performed by the respective patients; and this statement especially applies to the neuronic groupings in the psycho-motor area, which serve as the physical basis for the

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performance of "skilled" voluntary accomplishments. In other words, in these classes, considered for the moment from the purely physical aspect, the cerebra are completely built and thoroughly tested machines in full running order at the time when the breakdown is precipitated by too rapid running or by "wearing out."

In the case of the class of premature dementia under present consideration the state of affairs is very different. Here there is, in the first place, a highly-deficient durability of the cortical neurones; or, to continue the simile, imperfectly tempered material has been employed for the construction of the parts: and the neurones, or the parts themselves, are, in many instances, imperfectly constructed. Further, though most of, or all, the individual parts are placed in preparatory juxtaposition, even the simpler complexes of construction have only recently and experimentally been grouped into series. This is, in fact, the case even in the more highly endowed patients, in whom the higher complexes of neuronic association have already been tentatively produced.

It is thus only to be expected that, when such a machine is set running at high speed, all kinds of local breakdown will ensue. In the human cerebrum, owing to a structure which in its complexity of construction overshadows any machine of human manufacture, and to the numerous sources of motive power which exist through the medium of the different varieties of sensorial stimulation, complete breakdown is relatively rare, though local stoppages, local anomalous groupings of the simpler complexes, and particularly local repetitions or irregularities of action, are of common occurrence. This is especially obvious, though not peculiar to these, in the case of the more fundamental motor exhibitions, the patient either performing, or not performing, or often repeating, certain actions, and exhibiting, as the essential characteristics of these motor performances, on the one hand a tendency to uncertainty, and on the other a tendency to repetition, of action.

It is an obvious deduction from the above considerations that a more scientific classification of the types of premature dementia should be possible than obtains in the case of the "senile," "presenile," and "mature" classes of primarily neuronic dementia. In the latter, some, at least, of the symptomatological sub-classes are without a real, or even perhaps

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a possible, pathological basis—*e.g.*, such symptom-complexes as mania or melancholia, which are probably merely gross exaggerations of the normal emotional tone of the individual patients,—though they sufficiently serve the purposes of clinical description. In the case of premature dementia, however, it is possible to make a subdivision of the cases into those which do and those which do not exhibit phenomena which originate in sub-evolutional or dissolutive conditions of the psycho-motor area of the cerebral cortex. It is doubtful whether a further subdivision of the latter class into simple hebephrenic and paranoid types possesses, in the present state of our knowledge, an equally trustworthy pathological basis; but, in spite of a gradual shading of the cases into one another, such a separation of types is, at least, justifiable, and is at any rate convenient, from the clinical standpoint.

In the present section, therefore, the cases under consideration will be approximately classified into the commonly accepted "hebephrenic," "catatonic," and "paranoid" types.

The descriptions which follow, as has already been stated, are not intended by the writer either to illustrate the general symptomatology of the types, or to include all the more obvious clinical features which they present. They merely contain such details as he especially desires to bring into prominence in order to serve the purpose he has in view—namely, to demonstrate that premature dementia is not a simple clinical entity or a specific disease of the cerebrum, but is merely the dementia which develops at the earliest of the four most common periods of life at which primarily neuronic dissolution of the cerebrum occurs.

The class at present under consideration contains 112 cases, which will be classified as follows:

	M.	F.	T.	Per-centage.
Sub-class (1), approximately "hebephrenic" .	32	32	64	57
Sub-class (2), approximately "catatonic" . .	23	18	41	37
Sub-class (3), approximately "paranoid" . .	2	5	7	6
Total of cases of "premature dementia" .	57	55	112	100

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As might be expected in primarily neuronic dementia at the premature period of life (and as is also illustrated in the analogous but *progressive* dementia of juvenile general paralysis), the sexes are approximately equally affected, for at this period the predisposing factor—deficient durability of the cortical neurones—overshadows in importance the various exciting factors, which later in life not only acquire a greater relative value but differ both in kind and in degree in the two sexes.

The average age on certification, which is the only age available in the whole series, differs little in the several sub-classes, being as follows:

	M.	F.	T.
Sub-class (1)	23	25	24
Sub-class (2)	26	24	25
Sub-class (3)	21	25	24

Sub-class (1).—The age on certification varies from 15 to 30 years in the males, and from 16 to 30 in the females. The earliest age of *onset*, on such information as is available, is 15 years in the case of the males and 14 years in the case of the females.

Sub-class (2).—The age on certification varies from 15 to 29 years in the males (with the exception of one patient, who was kept at home from the age of 28 years to that of 34 years, at which age he was sent to an asylum), and from 19 to 27 years in the females. The earliest age of *onset*, on such information as is available, is 15 years in the case of the males and 17 years in the case of the females.

Sub-class (3).—The age of certification varies from 20 to 22 years in the males, and from 23 to 28 in the females. Owing to the small number of cases in the "paranoid" sub-class, these ages are, however, valueless for statistical purposes.

It is probable that few of these figures possess much real value, as the time of certification depends so much on the degree of trouble caused by the patient in his home or workhouse environment, and as the writer had few opportunities of obtaining really satisfactory personal histories, for in the case of admissions consisting of chronic patients the obtainable infor-

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mation varies in amount conversely with the duration of the certification of the individual patients.

Previous attacks.—The ascertained number of cases which had been previously certified is as follows:

	Males.	Females.	Total.	Percentage.
Sub-class (1) . .	7 in 32	3 in 32	10 in 64	16
Sub-class (2) . .	8 in 23	5 in 18	13 in 41	32
Sub-class (3) . .	0 in 2	1 in 5	1 in 7	14
Total . . .	15 in 57	9 in 55	24 in 112	21
Percentage . .	26	16	21	

Though this information is necessarily incomplete, the error of omission is presumably equally scattered throughout the series, and hence it may be deduced, as a crude observation, that previous certifications are more common in the male sex than in the female.

It may also be inferred that previous certifications are more common in the "catatonic" than in the "hebephrenic" and the "paranoid" types, and this inference is supported by the common clinical observation that "catatonic" cases often progress in a relapsing manner rather than as a slowly advancing mental deterioration, and are therefore more likely to be sent out "recovered" or to the care of their friends.

Heredity of mental disease.—The ascertained heredity of mental disease, though it possesses no actual value, leads at least to the inference that little or no difference in this respect exists between the different types. It is as follows:

	Males.	Females.	Total.
Sub-class (1) . . .	34 *per cent.*	34 *per cent.*	34 *per cent.*
Sub-class (2) . . .	26 *per cent.*	44 *per cent.*	34 *per cent.*
Sub-class (3) . . .	50 *per cent.*	20 *per cent.*	29 *per cent.*
Total . . .	32 *per cent.*	36 *per cent.*	34 *per cent.*

Though the percentages differ in the two sexes, it is probable

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that no deduction can safely be drawn from these, as it would not be justified by the number of available cases.

The average duration of residence in an asylum at the time of observation is as follows:

	Males.	Females.
Sub-class (1) . . .	10 years (1—34 years)	10 years (1—29 years)
Sub-class (2) . . .	8 years (1—21 years)	9 years (1—30 years)
Sub-class (3) . . .	9 years (7—11 years)	12 years (2—27 years)

These figures demonstrate that the average duration of life is not appreciably affected by the clinical type of the symptomatology, for the 112 cases represent the "premature dementia" population of an asylum at a *particular time*, and are not a series of cases selected during a special *period of time*.

As has already been stated earlier in this paper (*Journ. Ment. Sci.*, April, 1905, p. 337), one of the most frequent symptomatologies associated with the development of tuberculosis is one presenting many resemblances to stupor. This is probably the explanation of the fairly common opinion that cases of "catatonia" are especially prone to the development of tuberculosis—a view contradicted by the above data, which show that the average duration of residence of these cases differs little from that of the other types of premature dementia.

Degree of degeneracy.—Important conclusions have been derived from a study of the 112 cases from the point of view of physical and mental degeneracy, as the three types differ markedly in this respect.

In the following table are given the actual numbers and the percentages of degenerates—*i.e.*, of high-grade aments who exhibit marked stigmata of degeneracy, and in many cases evidence of developmental feeble-mindedness, which is almost sufficiently marked to cause them to be classed as cases of imbecility (the mildest type of low-grade amentia).

From this table the following inferences may be drawn:

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	Males.		Females.		Total.	
	Proportion of degenerates.	Percentage.	Proportion of degenerates.	Percentage.	Proportion of degenerates.	Percentage.
Sub-class (1), "hebephrenic"	20 in 32	*62·5*	13 in 32	*40·6*	33 in 64	*51·6*
Sub-class (2), "catatonic"	7 in 23	*30·4*	7 in 18	*39·0*	14 in 41	*34·1*
Sub-class (3), "paranoid"	2 in 2	*100·0*	1 in 5	*20·0*	3 in 7	*42·9*
Total	29 in 57	*50·9*	21 in 55	*38·2*	50 in 112	*44·6*

(1) In the 112 cases under consideration, the proportion of degenerates is greater in the male sex than in the female.

(2) The proportion of degenerates is greater in the "hebephrenic" type than in the "catatonic."

(3) In the "hebephrenic" type the proportion of degenerates is especially high in the male sex.

It is doubtful if the number of cases justifies more detailed deductions, and this remark especially applies to the "paranoid" type, which includes but 7 of the total of 112 cases.

The relative proportions of degenerates in the four classes of primarily neuronic dementia will now be considered. After what has already been stated in earlier sections of this paper it is hardly necessary to remark that important differences exist in this respect.

From the aspect of pure high-grade amentia, as has been remarked in the introduction to the second part of this paper (*Journ. Ment. Sci.*, July, 1905, p. 510), the age on certification, or the age at which the degenerate with neurones of average durability becomes unable to withstand the normal environment of sane individuals, depends on two factors—the resistance of the individual cerebrum, and the "stress" to which this is subjected—and is therefore an accidental detail which is of slight importance from the point of view of classification. In such cases an attack of certifiable insanity either adds another non-demented permanent inmate to the asylum population or results in the return to the outside world of a potential lunatic who is liable, under the influence of a relatively slight degree of "stress," to again become an asylum inmate.

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When, however, the degenerate also possesses neurones of deficient durability, it is obvious that age-incidence possesses a greater significance, and that the proportion of degenerates to non-degenerates in the demented insane must be smaller at each successive period of life. In such degenerates a permanent loss of mind results from an attack of mental alienation, and therefore necessitates their certification sooner or later, whereas pure high-grade aments, with neurones of average durability, may suffer and recover from many attacks of insanity in their home environment before their friends are tired of the trouble they cause, or become unable to look after them.

The proportion of degenerates is therefore greater in premature dementia than in the other classes of primarily neuronic dementia. This is clearly shown in the following table:

Primarily neuronic dementia.	Males.		Females.		Total.	
	Proportion of degenerates.	Percentage.	Proportion of degenerates.	Percentage.	Proportion of degenerates.	Percentage.
Class (A), "premature"	29 in 57	50·9	21 in 55	38·2	50 in 112	44·6
Class (B), "mature"	6 in 26	23·0	3 in 34	9·0	9 in 60	15·0
Class (C), "presenile"	2 in 18	11·1	5 in 47	10·6	7 in 65	10·8
Class (D), "senile"	20 in 53	37·7	24 in 70	34·3	44 in 123	35·8

In the above table the "senile" or "worn-out" class contains a high proportion of degenerates, as it not only includes the ordinary senile cases and senile high-grade aments, but also the hitherto non-demented old asylum inhabitants and the cases of hitherto stationary "premature," "mature," and "presenile" dementia, who, with the onset of senility, have developed "senile" or "worn-out" dementia (*Journ. Ment. Sci.*, October, 1906, p. 717). As it is impossible to satisfactorily distinguish between all these types, the senile class is thus a mixed one, and the percentages given represent the proportion of physical and mental degeneracy which existed at a particular time amongst the cases of primarily neuronic dementia who had arrived at the senile period of life.

Degree of dementia.—The degree of dementia existing in the

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class of premature dementia under consideration is represented in the following table:

Premature dementia.	Males.		Females.		Total.		Total percentage.	
	Mild.	Moderate.	Mild.	Moderate.	Mild.	Moderate.	Mild.	Moderate.
Sub-class (1), "hebephrenic" .	15	17	14	18	29	35		
	32		32		64		45	55
Sub-class (2), "catatonic" .	6	17	5	13	11	30		
	23		18		41		27	73
Sub-class (3), "paranoid" .	1	1	4	1	5	2		
	2		5		7		71	29
Total	22	35	23	32	45	67		
	57		55		112		40	60

Hence the "catatonic" form contains the highest percentage of cases which exhibit a moderate grade of dementia, namely, 73; the "hebephrenic" shows the lower percentage of 55, and the "paranoid" possesses the least proportion of the three, namely, 29 per cent. The total percentage of cases exhibiting a moderate degree of dementia in the class of "premature dementia" is thus no less than 60.

The relative proportions of cases possessing a moderate degree of dementia in the four classes of primarily neuronic dementia.—As has already been stated in the introduction to the description of this variety of dementia, and under the headings of the different classes which it contains, the actual amount of dementia is greater in the "premature" than in the "mature," and in the "mature" than in the "presenile" classes. The "senile" class, as has already been stated above, under the subject of degeneracy, falls under a different category, including, as it does, not only ordinary senile cases and senile degenerates with "worn-out" neurones, but also hitherto non-demented old asylum inhabitants, and cases of hitherto stationary "premature," "mature," and "presenile" dementia, who, with the onset of senility, are also suffering from "worn-out" neurones.

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The actual amount of dementia in the senile class is thus relatively high.

For simplicity of description, as the dementia in all the cases, with the exception of a small number belonging to the senile class, in which it is well marked, is of a mild or moderate grade, the number and the percentage of cases which exhibit a *moderate* degree of dementia will alone be detailed in the following table:

Primarily neuronic dementia.	Number of cases exhibiting moderate dementia.	Percentage.
Class (D), "premature" . .	67 in 112	60
Class (C), "mature" . . .	28 in 60	47
Class (B), "presenile" . . .	21 in 65	32
Class (A), "senile" . . .	68 in 123	55
Total	184 in 360	51

A further question will now be briefly considered—namely, whether degenerates or ordinary patients develop the greater proportionate amount of dementia. The ordinary high-grade ament, as has frequently been stated, but especially in Part II of this paper, develops an attack of insanity so readily under the "stress" of "normal" environment that he does not overreach the durability of his cortical neurones, and consequently, according to circumstances, either recovers or becomes a permanent asylum inmate without the development of an appreciable degree of dementia. When, however, the high-grade ament *does* overstep the limit of neuronic durability, it is a matter of uncertainty as to whether a greater or a lesser degree of dementia ensues than that which occurs in an ordinary "normal" individual who has similarly overstepped the limit of neuronic durability. It is with the object of furnishing a reply to this question that the following data are inserted.

In the table which follows the cases of primarily neuronic dementia are grouped, under the four classes into which this type of dementia has been subdivided, into "normal" patients and high-grade aments. As all the cases, except a few of the senile class in which the dementia is well marked, suffer from a

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mild or a moderate degree only, the latter grade alone has been considered in the figures and percentages, as the former is merely its complement.

Primarily neuronic dementia.	Proportion of "normal" cases exhibiting moderate dementia.	Proportion of high-grade aments exhibiting moderate dementia.
Class (A), "senile" .	37 in 79 = 47 *per cent.*	31 in 44 = 70 *per cent.*
Class (B), "presenile"	20 in 58 = 34 *per cent.*	1 in 7 = 14 *per cent.*
Class (C), "mature" .	23 in 51 = 45 *per cent.*	5 in 9 = 56 *per cent.*
Class (D), "premature"	38 in 62 = 61 *per cent.*	29 in 50 = 58 *per cent.*
Total . .	118 in 250 = 47 *per cent.*	66 in 110 = 60 *per cent.*

The above data sufficiently indicate that high-grade aments, *as a group*, when they develop dementia, pass more frequently to the moderate grade than do "normal" individuals.

This conclusion is especially evident in the "senile" or compound class, and it is not supported by the "premature" cases, in which the neurones of both "normal" and degenerate patients have apparently suffered equally commonly from a moderate degree of dissolution.

The table further illustrates the relative rarity of degeneracy in the "presenile" and the "mature" classes, which observation renders it probable that such degenerates as have not succumbed to cerebral dissolution at the "premature" period of life have continued relatively unaffected until the "senile" period has been reached.

It is probable, therefore, that the *cause* of the main conclusion deduced from the data contained in the table is to be found in a greater tendency to "senile" or "worn out" dissolution of the cortical neurones on the part of the degenerates than exists in the case of the "normal" individuals. This explanation is rendered the more likely by the common observation that low-grade aments, as a rule, attain to senility at a comparatively early age, *e.g.*, even at forty years; in other words, that the cortical neurones of well-marked degenerates are especially prone to undergo early senile involution or "wearing out," even in the absence in many cases of an appreciable degree of "wear and tear."

It may, therefore, with a reasonable probability that the deduction made from the data contained in the table is correct,

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be stated that the presence of physical and mental degeneracy (high-grade amentia) does not, until the "senile" period of life is reached, influence in any way the grade of dementia which follows an over-stepping of the limit of neuronic durability. When, however, the "senile" period has been attained, the presence of high-grade amentia in cases which have overstepped the limit of neuronic durability results in the more frequent development of a moderate grade of dementia than occurs in patients with "normal" cerebral development; and this result is due to a greater tendency to "senile" or "worn out" involution of the cortical neurones on the part of high-grade aments than exists in the case of "normal" individuals.

Class (d).

Sub-class (1)—*Premature Dementia—approximately "Hebephrenic."*

This sub-class contains sixty-four cases, of which thirty-two are males and thirty-two are females. It includes the cases of premature dementia in which "loss of mind" is the essential clinical feature, and which exhibit neither pronounced motor phenomena nor definite semi-systematised delusions. Further, in such examples as show a tendency to perform, or to repeat, certain acts, these (*cf.*, No. 595, p. 450) are usually "skilled" in nature, and are presumably mechanical remainders of what has formerly been learned and practised, rather than the results of imperfect learning or deficient practice, which are such obvious features of certain of the motor phenomena exhibited by cases of "catatonia."

The average duration of residence, in the case of either sex, is ten years; and the individual duration varies from one to thirty-four years in the males, and from one to twenty-nine years in the females.

Both owing to the duration of residence and to the existence of dementia, the cases fall into the category of "chronic"; and therefore, apart from the reasons adduced in the early part of the present section for the mode of treatment of the subject which is being adopted, no detailed description of precursory or "acute" symptomatology will be attempted. It suffices, with reference to this, to remark that, in the experience of the writer, all such cases, during the earlier stages of the attack of

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insanity which resulted in their "chronic" mental condition, exhibited a greater or a lesser degree of mental confusion, and that the severity of this, in uncomplicated cases, bears a direct relationship to the grade of dementia which ensues (*Journ. Ment. Sci.*, July, 1906, pp. 427–490).

The symptomatology exhibited by the cases contained in this sub-class is that of stationary dementia, namely, "general dulness and apathy, a loss of initative, and an indifference to their surroundings; a marked degree of stereotypism of all the mental processes, and an inability to learn new acquirements; a mechanical method of performance of known acquirements, a general stupidity and inability to understand when an attempt is made at correction of any kind, and a tendency to revert to accustomed modes of speech and action; finally, a tendency to the repetition of accustomed actions, which often shows that these have been performed in the entire absence of intelligent volition" (*ibid.*, p. 488).

This symptomatology is due, in the opinion of the writer (*Journ. Ment. Sci.*, April, 1906, pp. 221–271), to a more or less extensive dissolution of the centre of higher association and co-ordination in the prefrontal region, which is the latest developed and most important portion of the grey mantle of the cerebrum, and the first part to undergo dissolution under "stress" or normal involution; and the cases in the present sub-class, as a whole, exhibit, in probably a purer form than is seen in any of the varieties of primarily neuronic dementia, the results of this dissolution.

As will be seen from the illustrative cases inserted at the end of this description, the contents of the present sub-class include examples both of amentia, chiefly of the high-grade type, and of what were originally presumably "normal" individuals. Of the 32 males, no less than 20, or 62·5 *per cent.* are degenerates; and of the 32 females, no less than 13, or 40·6 *per cent.* Hence 33 of the 64 cases, or 51·6 *per cent.* are examples of low- or high-grade amentia—a larger proportion than occurs in the "catatonic" and "paranoid" sub-classes of premature dementia.

Whilst this observation points to the desirability of suitable (State) provision for the care and control of the feeble-minded, many of whom, under the ordinary environment of the "sane" members of the race, are liable to suffer from cerebral dissolution with resulting dementia, the corollary that 48·4 *per cent.*

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of the cases were presumably of "normal" cerebral development shows that exceptional "stress" is equally harmful to these, and produces its quota of cerebral dissolutions. The latter point is probably the more important of the two, as such (non-demented) "normal" individuals would be of more use to the race than would such (non-demented) degenerates, and hence is suggested the desirability that greater attention should be attracted to the often disastrous results of over-training, even in subjects who are apparently of "normal" cerebral development.

The amount of dementia existing in the cases included in this sub-class is high, as many as 55 *per cent.* exhibiting a moderate grade. This, though considerable, is rather less than the percentage of 60 in the entire class of premature dementia.

Of the sixty-four cases in the sub-class forty-four were workers (twenty-five good, eight ordinary, and eleven poor), six refused to work, and fourteen were incapable of useful employment.

The following fourteen cases are inserted for illustrative purposes:

Congenital Feeble-mindedness; Mild Premature Dementia; certified six years.

CASE 539.—A. A—, male, single, æt. 35. Of no occupation. Feeble-minded from birth. Certified since the age of 29. Notes taken three days after admission.

A dull-looking man, of sleepy appearance. Forehead prominent, head large, ears small and without lobules, mouth small and lips thin. He gives his name, and states that his age was 27 on April 3rd last. He knows where he is, where he has come from, when he came, the present day, and the approximate date. He is very slow in giving replies to questions. He does not know the present year. He tells me, in reply to leading questions, that he went to school, and that he was in the eighth standard at the age of 15. When asked to multiply 12 by 9 he tries to work it out by counting on his fingers, and eventually says "10." To a question of 4×3 he replies "8," after counting the same method. He however, again in the same way, gets $2' \times 2$ correctly, but says that $3 \times 3 =$ "6." When asked to say the alphabet he inserts two "l's" and misses out "u" and "v." He spells "horse" and "cow" correctly, but "elephant" is "eofin," and he does not attempt "asylum." He reads like a very young child, and, even after spelling them, entirely fails to make anything of such words as "attendant" and "commencing." He is dull and slow in all his movements, and exhibits none of the wayward intelligence and erratic or rapid movements and actions of the non-demented imbecile.

Whilst under observation he was a useful mechanical worker, and

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was able to attend entirely to such personal matters as washing, dressing, the calls of nature, etc.

Note.—The patient differs from the imbecile and approximates to the dement in his general dulness, his sleepy appearance and the slowness of his movements, and in the general absence of initiative, either with or without the stimulus of sensorial excitation.

High-grade Amentia; Mild Premature Dementia; certified five years.

CASE 542.—T. W. C—, male, single, æt. 23, errand boy. Certified since the age of 18. Father insane. Notes taken two days after admission.

A dull, sleepy-looking boy, who is biting his finger nails. Palate very high and chink-like. He gives his name with a slight lisp, and states that his age is 18. When asked to do so, he slowly and carefully writes his name. Many of the letters, and even parts of letters, are written singly and laboriously. All the dots are inserted, weak parts of certain letters are touched up, and a full stop is inserted after his Christian name. He seems then unable to put down the pencil, and after a long pause adds, in similar writing, "18 years old." During the writing he frequently pauses to lick the pencil. He reads well. He knows where he is and when he came. He states that the day is Friday (Saturday), and that the time is 2.30 p.m., after which he seems to remember the clock as he turns round to look at it (1 p.m.). He knows neither the month nor the year, and states that he was seven years (really five) in his previous asylum. He states that $4 \times 5 =$ "20," $9 \times 6 =$ "42," $7 \times 2 =$ "14," $4 \times 5 =$ "20," $4 \times 7 =$ "28," $7 \times 5 =$ "35," $9 \times 6 =$?, $6 \times 9 =$ "78." His memory frequently fails during these and similar replies, and he then adds up, at times incorrectly, to aid himself to the result. He spells fairly well, such words as "house" and "elephant" being correctly rendered. He states that previous to going to an asylum he earned fourpence a week as an errand boy. During his residence he has "tried to do bed-making and house-cleaning, and sweeping and cleaning chambers."

Whilst under observation this patient was quiet and well behaved, and, though dull, a useful worker.

Note.—This case is a good example of mild premature dementia in a high-grade ament. The method of writing his name is sufficient in itself to enable a diagnosis to be made, and the evidence produced of his present attainments and previous education, though brief, for reasons of space, is more than enough for the same purpose. The present case thus differs from the previous one, in which, for a clinical diagnosis, a general knowledge of the behaviour and habits of imbeciles and of dements, rather than a special study of symptomatology, is needed.

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High-grade Amentia; Moderate Premature Dementia; certified twelve years.

CASE 544.—G. H—, male, single, æt. 37. Certified since the age of 25, and stated to have been feeble-minded since birth. Notes taken two days after admission.

A dull, heavy-looking man, with a large and protruding lower lip, deep horizontal fissures on the forehead, and a vacant and expressionless stare. He is able to give his name, but does not know his age. He has come from "another place," and has been "in places like this a long time." He says that he has been to school, but does not know in what standard he was when he left. He cannot read or write. He volunteers the information that he has two brothers, and replies to a question that he has no sisters. On being asked why his front teeth are missing he says, "Too many sweets I expect." He states that he does no work and does not smoke. When asked to frown he is unable to do so. When asked why he has a slight contracture of his little finger he replies, "Squeezed in school door, a boy done this thing, a boy, pinched." He is dull and slow in all his movements, and walks with his head bent forward and with a very slow, shuffling gait.

Whilst under observation he was at times restless, shuffling about the ward, and being irritable if interfered with. He was quite unable to work, was dirty and untidy in his appearance, and, unless prompted and at times assisted, was unable to attend to his personal wants.

Moderate Premature Dementia; certified six years.

CASE 547.—W. H. B—, male, single, æt. 32, labourer, and in army reserve. Certified since the age of 26. Notes taken two days after admission.

A fatuous-looking man who laughs in a silly manner when addressed. He takes little notice of his surroundings. When asked to frown he looks up and says, "That's all right." He notices that I am taking notes. When asked his name he replies, "Nothing, same as yours." Where have you come from? "You shouldn't make fools of people like you do." How old are you? "About 40." Married? "Yes." Children? "You needn't make a fool of us you know," and he then laughs in a foolish manner. He takes his food well, goes to the lavatory with the other patients, and dresses himself. He sits in the same place all day long and is quiet. He at times looks slowly around, and at others grins fatuously to himself.

Whilst under observation he was dull and listless, paid little attention to his surroundings, and was entirely unoccupied.

High-grade Amentia; Mild Premature Dementia; certified eight years.

CASE 550.—W. H—, male, single, æt. 29, boatman. Certified since the age of 21. Maternal aunt insane. Notes taken three days after admission.

A dull, sleepy-looking man. The cranium is low, the base of the skull is broad, the ears project, the mouth is large, the lips project,

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and the palate is high and narrow. He gives his name, and when asked his age replies, "Asked yesterday I said 25 and he said I was more than 25." He knows where he is, but pronounces the name of the place incorrectly, and in a shortened and incomplete manner. He knows the day on which he came and the present day and date. He knows where he has come from, and states that he was there seven or eight years. When asked why he was incarcerated he replies, "Was sent there I suppose." When the question is repeated he says, "I don't know." When asked to write his name he does so in a slow and laborious manner. He corrects the imperfect letters and dots the "i's." Nearly every letter is written separately and in copy-book style. When I ask him to add his age, he slowly and carefully writes "25," the "curls" at the beginning of the "2" and the end of the "5" being elaborately made, and the "dash" at the top of the latter being long and well curved. I then ask him about the work he did in his previous asylum, and he replies that he wheeled coal and got "pretty fair" of tobacco for doing so. He does not know why he has been incarcerated for such a long time, and "it don't trouble me much."

Whilst under observation patient continued dull and apathetic and showed a marked lack of initiative, but he was a useful mechanical worker.

Chronic Mania; Mild Premature Dementia; certified six years.

CASE 551.—G. S—, male, single, æt. 28, railway porter. Certified since the age of 22, and showed symptoms a year previously. Grandfather and uncle insane. Notes taken two days after admission.

A dull-looking young man with an expressionless face and projecting ears. He gives his surname, and when asked his Christian name replies, "Suppose we say Claremont, there's a fortune there I believe. Take the evidence and obtain the notes" (apparently from noticing that I am writing in a book). Asked where he is, he says "cover place." When the question is repeated, he replies "There were a few pictures on the hill when I first knew it." When I ask if he has ever heard of C—, the asylum from which he has been transferred, he says, "Yes, I was employed there in the railway." When asked why he was incarcerated he states, "I expect I lived in a tower for a couple of years without anything to eat and that weakened my mind." He says, that it is 13 years now since he left the goods' office at H— (improbable). He knows the present day, the day when he came, and the date within a day. He then tells me that he was here one evening in March two years ago. (Certainly untrue.) In his previous asylum he "did a little wiping and washing up and did pillows and beds." He was there five years (six). His age is "70 to 80 years." He was 70 when he went to the asylum, "something like an old countryman, you know."

Whilst under observation he was on the whole dull and apathetic, but at times he became excited. He was a useful worker but showed great lack of initiative.

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High-grade Amentia; Chronic Mania; Moderate Premature Dementia; certified thirty-three years.

CASE 562.—G. H—, male, single, æt. 54, seaman. Certified since the age of 21. Notes taken three days after admission.

A smiling man with bright eyes. The left eye is placed lower than the right and there is facial asymmetry. There is marked intermittent contraction of the orbicularis palpebrarum. The tongue is enormous. The palate is within normal limits. The patient frequently makes clucking noises with his glottis and jerks his lower jaw forwards. He also frequently eructates. He laughs, mutters, and talks to himself. He gives his name indistinctly, and when the question is repeated he shouts out the reply at the top of his voice. He states that his age is 70. He knows the day and the day when he came. When asked where he came from he replies, "Train." When the question is repeated he says, "Off the metals." When asked if he has come from H—, he replies "Yes," and to a question as to how long he lived there he says, "Years, 70 years." Whilst there he worked at "lugging solids—coals." He does not smoke. All his replies are jerked out suddenly.

Whilst under observation he remained quite unchanged. He paid little attention to his surroundings and showed much lack of initiative, but he was a useful mechanical worker.

Note.—The habit-tricks of this patient, and his mode of speech, suggest that the case should, perhaps, have been included under "catatonia"; but a careful study of the case as a whole led to its inclusion in the present group. (See also note on Case 595.)

Mild Premature Dementia; certified six years.

CASE 564.—D. D—, female, single, æt. 25, general servant. Certified since the age of 19. Maternal aunt insane. Notes taken two days after admission.

A pale, anæmic girl. Teeth irregular and badly enamelled. Palate narrow and deep. Some degree of red œdema of extremities, elbows, etc. Faint skin-cracks on abdomen.

Patient lies quietly in bed and bites her right hand and sucks her fingers. She rarely stirs, but speaks rationally, though childishly, in reply to questions. She knows where she is, and, roughly, how long she was in her previous asylum; and in reply to a question, she informs me that she did washing there. She has, at times, suffered from auditory hallucinations—voices "asking me to be good and that." She used, at first, to think that she had done wrong, and "did not do my work properly sometimes." She would have liked to go home, and used to *try* to work, etc. She often makes use of the word "try." She knows that she had a child some time ago, or thinks she had, but cannot give any information about it. She does not know whether it is alive, and "I do feel sometimes as if I would like to know if it is alive."

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At times, when lying quietly, she moves her lips as if whispering to herself.

A few days after admission she began to do a little ward work. She was willing but extremely dull and slow.

Whilst under observation she became stout, but continued anæmic. She was dull, heavy, and phlegmatic, and had absolutely no capacity of initiation, though she answered questions readily enough. She was a willing worker but was better able to understand what was wanted of her than to perform it. She was slow and clumsy, and when, *e.g.*, she washed a floor, she often slopped the water about, wet her dress, and wiped very little of the water up again. She was, therefore, of little use except for unimportant and purely mechanical employment, and even then she required constant supervision.

High Grade Amentia; Moderate Premature Dementia; certified thirteen years, and previously at the age of twenty-four. Sister of Case 576.

CASE 575.—E. J—, female, married, æt. 41, of no occupation. Certified since the age of 28, and previously at the age of 24. Sister of Case 576. Great-grandfather insane. Notes taken on the day after admission.

Patient is a dull, apathetic woman, who shows fewer and less marked stigmata of degeneracy than occur in the case of her sister (Case 576). Forehead free from lines of any kind, hair light grey, palate high and narrow in front, teeth poor, skin cracks on abdomen.

She at times laughs in a silly manner, and on these occasions her forehead remains unaffected. She states that her age is six. When asked her name she says that she does not know and then adds, "an invalid." When asked if she is married she shows me a button on her night-dress and mutters something inaudible. She then asks "would you like me to put my name on that little bit of biscuit?" She later makes such remarks as "the publisher wants his money, the Prince of Wales," "glad you got home," "sixteen years since," and "don't you feel all right like that," and tries to cover herself up in bed.

Whilst under observation patient remained dull, apathetic, and uninterested in her surroundings. She occasionally talked a little to herself. She was unable to perform work of any kind, and was only imperfectly able to attend to herself.

High-grade Amentia; Echolalia; Moderate Premature Dementia; certified three years, and previously at the age of 27. *Sister of Case* 575.

CASE 576.—E. A. B—, female, single, æt. 34, of no occupation. Certified since the age of 31 and previously at the age of 27. Sister of Case 575. Great-grandfather insane. Notes taken on the day after admission.

Patient is of similar type to Case 575, but is of much more markedly degenerate appearance. Forehead receding, hair very grey, palate very high and square at the canines, teeth fair, mouth large and open, lower lip very pendulous, ears lobuleless. She is extremely narrow between the anterior superior iliac spines.

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A dull, stupid-looking woman, who appears to be much older than her stated age. She calls herself "E. A. W." She is not married but wants to be. She scratches her face and smiles, or at times sighs. To questions she replies, "yes, yes," "what's matter," "I don't think it's my fault," etc. She says that her age is 60 and that she is "at Hampstead in John Street." To a further question she replies that she was at Hampstead yesterday and therefore does not seem to remember anything about her journey here. To a later question she says she does not know where she is now. She names the day correctly and says that "it looks like winter" (August) when asked the month. The year is "1888, 1860, 1880," (1903). She is "5 years old yesterday" (*cf.* her sister's remark that her age is 6). She differs from her sister in exhibiting well-marked echolalia, repeating, with alteration of pronoun, practically every question put to her.

Whilst under observation patient was dull, listless, and apathetic, and took absolutely no interest in her surroundings. She was unemployed and was hardly able to do anything for herself. She thus exhibited a somewhat greater degree of dementia than her sister.

Chronic Melancholia; Mild Premature Dementia; certified five years.

CASE 578.—A. M. M—, female, single, æt. 28, cook. Certified since the age of 23. Notes taken on the day after admission.

Upper lip prominent. Nostrils thick and round. Palate shelves forwards markedly. Well-marked lateral spinal curvature. Breasts virginal. No skin cracks on abdomen.

A very depressed and apathetic woman, who, when asked if she is a cook, states that she was a nurse at G— hospital for ten months in the surgical wards. She broke down with the work and returned home. She stayed at home for two years, and then went out again to nurse a lady who was suffering from influenza. She herself contracted the disease, fell into a low state of health, and attempted suicide by cutting her throat. She was then removed to the asylum. She was at that time about 24 years of age, and was 29 on her last birthday. When asked how she became a probationer in that particular hospital at such an early age, she states that she led the authorities to suppose that she was a good deal older than she was. Ever since she went to the asylum she has been "dull through being physically and morally ruined." She has been "more sinned against than sinning." When then asked as to immoral relations with men, she replies, "Yes, several." She feels that she will never recover from her dulness and depression. She does not suffer from hallucinations. Her knowledge of time and place is accurate and her general memory is practically normal. She is, however, dull, slow, depressed, and apathetic, is very slow in her mental processes, and shows much lack of initiative.

Whilst under observation patient continued mentally unchanged. She showed much mental hebetude but was a useful worker. Judging from her education and mode of speech it is probable that she had developed at least a slight degree of dementia, and had been originally of more than average intelligence.

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High-grade Amentia; Moderate Premature Dementia; certified fifteen years.

CASE 583.—A. E—, female, single, æt. 39, domestic servant. Certified since the age of 24. Notes taken three days after admission.

A blank-faced woman, with bright eyes, ears without lobules, and a high palate. She has a pleasant but fatuous smile. She takes very little notice of me and cannot be got to reply to questions. She cannot handle a pencil, and she holds her hands as if she had not used them for years, which is also probable from their general appearance. When pressed by questions she eventually remarks, "Get away," and then gabbles on to herself in an entirely unintelligible manner, saying a few words at a time, playing with her dress, her fingers, etc., and taking no further notice of me.

Some months later she showed very little, if any, change in her mental condition, which was as follows: She mutters in a partially intelligible and nervous manner. She plays with her fingers and dress, and jerks her arms about like a nervous child. She *can* speak plainly, as she says, "I don't want to sit down, I don't want anybody." "Jack's not Jack"; "no material feeling." She appears to have talked so much to herself that it has eventually become a habit not to articulate clearly. At times she laughs, but she soon relapses into such, at times monkey-like, habits as examining her fingers or the buttons on her dress, blinking, gazing down on the floor, etc.

She is fairly tidy and dresses herself, but she does not make her bed. She is at times noisy. She is occasionally wet in her habits. She is unemployed, except for doing a little rubbing sometimes, and on these occasions she tends to work at the same place unless she is moved on.

Chronic Mania; Moderate Premature Dementia; certified eight years, and twice previously since the age of 17.

CASE 585.—E. L. T—, female, single, æt. 30, of no occupation. Certified since the age of 22 and previously on two occasions, the first of which was at the age of 17. Paternal uncle and maternal great-aunt insane. Notes taken two days after admission.

A frowning, untidy girl, who rapidly settles down to complete apathy with her head bent on her chest. Her palate is high, and deep in front, and her extremities are cold and blue. She gives her name and states that her age is 27. She speaks very childishly and looks about 20 years old at the most. When asked to write her name and age she does so in exactly the manner characteristic of cases of premature dementia, which has already on more than one occasion been referred to, in the description of Case 550 for example. She says that she has come from the West Indies, and that she came "a long time now" ago. She has heard of the name of her last asylum but does not know how long she was there. She has an extremely dull appearance, but she frequently frowns. She takes little or no voluntary notice of her surroundings, and is wet in her habits.

Four months later there was little or no change in the patient. This is evident from the following description: Her face is screwed into

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an almost perpetual frown. She gives her name and states that her age is 22. She knows neither the day nor the date, but thinks that it is winter (February). She replies, "I don't know" to practically every question put to her. She usually sits all day long with her arms folded and her eyes shut, and with her head bent forwards, and her chin touching her sternum. Her extremities are blue and toneless. She is occasionally wet in her habits. She dresses herself and at times makes her bed. She never reads but she has written two letters to her friends. Sometimes she is very excitable, spiteful, and impulsive, and she has smashed more than once. She also, on these occasions, uses foul language. At times she has worked very well for about a week, and she can make beds very nicely, although she rarely does so.

Verbigeration. Moderate Premature Dementia; certified eleven years.

CASE 595.—J. C—, female, single, æt. 36, housewife. Certified since the age of 25. Cause stated to be "confinement." Sister insane. Notes taken two days after admission.

A dull, sullen woman, who sits quietly and takes no notice of her surroundings. She is stout, and is phlegmatic in appearance and behaviour. No skin-cracks on abdomen. Marked corns on knees. She gives her name, and, when asked her age, replies, "10 years old, 10 years old. I'm 10 years old, 10 years old . . . 10 years old . . . 1899." Where are you? "I know what you want to know, nothing, all right." Who is that? (a patient). "That's Jane Potter . . . . nothing" (untrue). Who is this? (a nurse). "That's Ethel, Alice, Alice, Alice" (untrue). What is the day to-day? "Saturday. To-day is Saturday, Saturday, Saturday" (correct). She rocks to and fro as she talks. Where do you live? "Where's Peter, poor old Peter? Yes, all right, Peter, poor old Peter." Where have you come from? "H—s, H—s, seaside, H—s. . . . H—s. H—s. . . . H—s. . . . Came from H—Hh asylum. That's right. H—Hh asylum, you devil. H—Hh asylum. . . . H—Hh asylum." When not asked questions she laughs and whispers to herself.

The following notes were made some months later: She is dull and phlegmatic, and sits and plays with her fingers or a bit of thread. She replies in a similar manner to questions, *e.g.*, Do you sleep? "Me, I don't sleep. I never sleep. I never do nothing. Oh! dear, dear, I never do nothing." In playing with the string one notices that she does it in a mechanical but "skilled" manner. The action is, in fact, a mechanical remainder of what she has formerly learned and practised.

As regards her general behaviour, she is at times inclined to be spiteful. She often makes grimaces, and laughs to herself. She has a habit of throwing out of the windows everything she can lay her hands on, on the ground that it is dirty. She, in fact, thinks that everything is dirty and should be thrown away. She often repeats one or two words, *e.g.*, "beautiful," "Pretty Eliza"; and when irritated she repeats one or two phrases, *e.g.*, "Dirty looking thing, I'll make you run," and "I'll cut your ear-holes off." She is clean in her habits and fairly tidy,

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and she attends to herself. She is a bad bed-maker, but is moderately useful at sweeping and dusting. If asked to do anything she invariably replies "Yes, all right." She sews if everything is got ready for her, and she is very fond of unpicking.

Note.—Like Case 562, this case approximates somewhat to "catatonia" in symptomatology, especially in the verbigeration and the tendency to mechanical repetition of certain actions. As, however, the "Frankenstein" or "mechanical model" is not suggested by these actions, both cases have been included under the present sub-class. The detail that the insanity of Case 595 was apparently precipitated by confinement is, in the opinion of the writer, as has already been stated, merely an unimportant etiological episode, for such a factor, even if followed by a general toxæmia, has no necessary bearing on general symptomatology.

Class (d).

Sub-class (2). *Premature Dementia—approximately "Catatonic."*

This sub-class contains 41 cases, of which 23 are males and 18 are females. It includes those cases of premature dementia which, in addition to "loss of mind," are further characterised by the exhibition of pronounced motor phenomena.

The age on certification varies from 15 to 29 years in the case of the males, and from 19 to 27 years in the case of the females. The earliest age of onset, on such information as is available, is 15 years in the case of the males and 17 years in the case of the females.

The average duration of residence is 8 years in the males and 9 years in the females, and is thus only slightly less than that in the preceding sub-class. The individual duration varies in the males from 1 to 21 years and in the females from 1 to 30 years. There is, therefore, no evidence that the average duration of life in the cases belonging to the present sub-class is appreciably affected by the clinical type of the symptomatology.

All the cases exhibit, to a greater or a lesser extent, the symptomatology of stationary dementia, which was briefly summarised in the preceding sub-section, and, in addition, show certain characteristic motor phenomena. It is not proposed here to give a complete list of these motor phenomena, but

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merely to briefly enumerate such as are exhibited by the illustrative cases which are cited at the conclusion of this description, as these are sufficiently varied to serve the purpose the writer has in view.

They are as follows:

Anergic stupor, where the limbs are absolutely flaccid, and from which the patient may, however, awaken to perform such lower voluntary functions as attending to the calls of nature, taking food, etc.

Simple cataleptoid states, in which the limbs may purposively, accidentally, or by outside influence, assume all kinds of unnatural positions, and maintain them for lengthened periods of time.

Semi-voluntary cataleptoid states, in which the positions are partly under voluntary control and are largely maintained by an effort of attention. As an example of the simpler type, if one arm be raised by the observer, it remains where it is placed, but gradually falls under the influence of gravity; if the second arm is then raised the first at once falls. As an example of the more complex type, one arm may be raised and remain so; when a second is raised both remain as placed; when the mouth is then opened by suggestion to the patient by one of the several methods in vogue, it remains open and the arms continue immobile; when, finally, a particular leg is raised, either by the observer or at his suggestion, the mouth completely relaxes, and the arms partially relax. [In many such cases persistent prompting enables much useful mechanical work to be performed.]

Resistive stupor and *stubbornness*, in the former of which the patient forcibly resists every extraneously attempted movement, and in the latter almost invariably does the reverse of what is suggested or required.

The sudden striking of attitudes and the performance of forced movements and actions, which in chronic cases are stereotyped and habitual; also the perpetual exhibition of such muscular positions as *frowning* or *pursing the lips*.

Repetition of such movements and actions as are performed, and an apparent *inability to cease*.

Impulsiveness and *aggressiveness*.

Hebetude and *delayed replies to questions;* also *echolalia*, with or without change of pronoun, this last being apparently a

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similar phenomenon to what is in some persons a normal mode of assisting themselves to the understanding of a question, by the aid of further centres of lower association.

A tendency to *reply to questions and then to spell out the reply*, and even to repeat the reply; also *verbigeration*.

Extraordinarily rapid cerebration, with instantaneous replies to questions, or with no reply at all if the question is not abruptly and rapidly put.

A peculiar method of writing, which includes one or more of the following characteristics: Delay in commencing to write, and hesitation as to where exactly to start; great care both in writing and in correcting, completing, and "touching-up" what has been written; a tendency to write without performing the normal movement from left to right; inability to leave off writing and put down the pencil; and, finally, a tendency to repeat the writing, or certain letters or words, over and over again.

A general absence of smoothness and refinement in all the movements and actions which are performed.

The above symptoms indicate, in the view of the writer, a functional disturbance, and, in most of the cases, a partial dissolution of the neurones of the psycho-motor area of the cortex cerebri, and also demonstrate that the different associated groups of neurones, by insufficient exercise, owing to the age of the patient, are imperfectly organised into stable complexes, and, for the same reason, are under incomplete or imperfect voluntary control. The pathological condition is thus, on the one hand, one of sub-evolution of function, and, on the other, one of dissolution or involution; and a more extensive tract of cortex cerebri is therefore involved in the pathological process than occurs in the "hebephrenic" type of premature dementia.

The motor phenomena resemble, in brief, those which would occur in a "Frankenstein" [1] or "mechanical model," in which certain parts were imperfectly fashioned; in which certain groupings of parts were imperfectly tested and not in proper running order; in which the higher mechanical complexes were imperfectly controlled and co-ordinated into series, and, therefore, tended to stop, to repeat action, or to go by fits and starts; and in which, owing largely to the existence of several sources of motive power (*i.e.*, from the different organs of sensation), certain mechanical complexes tended to run

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independently in consequence of an imperfect general co-ordination of, and control over, the whole mechanism. The motor phenomena are thus varied, and are, on the whole, of a distinctly positive or a definitely negative nature; and repetition, wayward and grotesque action, etc., are common.

In chronic cases the phenomena are often still further complicated as regards an immediate explanation, but simplified as regards their actual exhibition, by a more or less extensive dissolution of neurones, which results in stereotyped motor remainders of former "skilled" accomplishments. These, occurring on the dissolution side of the scale, differ in character from the erratic, grotesque, repeated, mechanical-model-like, and often "unskilled" movements which occur on the sub-evolution side and are due to imperfect control and insufficient practice.

The above remarks on the general pathology of the "catatonic" sub-class of premature dementia, point, in the opinion of the writer, to a more extensive process of neuronic dissolution than occurs in the "hebephrenic" sub-class; and this view is supported by the amount of dementia which is found in the cases belonging to the former. Whilst in the "hebephrenic" sub-class the percentage of cases which exhibit at least a moderate grade of dementia is 55, this percentage amounts in the "catatonic" sub-class to no less than 73, which is at the same time much higher than the percentage of 60 in the complete class of premature dementia.

The writer thus feels justified in regarding the "catatonic" form of premature dementia as merely a more extensive grade of cerebral dissolution than the "hebephrenic"; and in holding that it exhibits such distinctive motor phenomena on the one hand through immaturity or sub-evolution of—and consequent deficient stability of, and incomplete higher control over—the neuronic complexes of the psycho-motor area, and on the other to the existence of stereotyped motor remainders of a "skilled" nature consequent on the survival, during the process of cerebral dissolution, of local and relatively stable neuronic complexes.

From the latter (dissolutive) aspect in mental disease generally, and from the former (developmental) aspect in many of the types of high grade amentia but especially in the class of "cranks and asylum curiosities," the homology between these motor phenomena of catatonia and the psychic phenomena

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which are due to affections of the various centres of lower association (including hallucination), is obvious, and affords support to the opinion of the writer (*Journ. Ment. Sci.*, April, 1906, p. 268, and *Brain*, Summer, 1903, pp. 217, 218) that the psycho-motor area is also a centre of lower association, and not a projection sphere.

As might be expected from the above remarks on the general pathology of "catatonic" motor phenomena, the histological evidence hitherto obtained has been positive and negative in the hands of different observers. The purely developmental or sub-evolutional phenomena of the "Frankenstein" or "mechanical model" nature, being due to a deficient stability of neuronic groupings owing to insufficient practice in the co-ordination and control of the complex physical bases of the "skilled" movements evolved, have necessarily no morbid histological features capable of detection by the methods at the disposal of the neuro-histologist; and hence the entire absence of gross morbid appearances, in the psycho-motor area of cases which exhibited during life marked cataleptoid phenomena, is only to be expected. On the other hand, well-marked morbid appearances in the cortex cerebri—especially obvious in the Betz cells—of cases possessing considerable dementia, and, at the same time, exhibiting special stereotyped motor remainders of former "skilled" movements, are naturally found in association with general prefrontal and frontal cortical dissolution; but, with our present knowledge, at any rate, it is impossible to isolate relatively normal physical cell-groupings for such motor remainders amongst the complex galaxy of normal, and partially or completely disorganised, cell-elements in the psycho-motor area. It is, however, likely that the histological study of cases, selected according to the general type of the motor phenomena exhibited by them, may, even by the employment of the neuro-histological methods at present at our disposal, lead to fruitful results in the near future.

The present sub-class, like the last, includes both presumably "normal" individuals and degenerates. In the male sex the percentage of high-grade aments is 30·4, in the female, 39·0, and in the whole sub-class, 34·1. This last is much lower than the corresponding percentage of 51·6 in the "hebephrenic" sub-class, and considerably lower than the percentage of 44·6 in the total class of premature dementia. Such a result is

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a priori to be expected, as more extensive dissolution naturally occurs when the breaking-strain of the relatively normal cerebrum is reached by over-training, than follows the attainment of the less severe breaking-strain of the cerebrum of the degenerate. A considerable proportion of high-grade aments, in fact, break down so readily under the "stress" which is the normal environment of the sane, that they sustain no appreciable neuronic damage, and convalesce, only again to relapse, until they finally become permanent and non-demented asylum inmates.

Of the forty-one cases in the present sub-class sixteen were workers (eight good, two ordinary, and six poor), eight refused to work, and seventeen were incapable of useful employment.

The following twelve cases are inserted for illustrative purposes:

Attitudes and Forced Movements; Stubbornness; Impulsiveness; Rapid Cerebration; Mild Premature Dementia; certified four years and previously at the age of 15.

CASE 596.—W. E. W—, male, single, æt. 25, clerk. Certified since the age of 21 and previously at the age of 15. Notes taken three days after admission.

A dull, heavy looking man. Palate high, and narrow in front. He takes little or no notice of me, but replies to short, sudden, and rapidly-spoken questions. He knows where he is and where he has come from. He cannot say when he came but asks me if I have forgotten. He then guesses several days in succession and all wrongly, and afterwards talks on to himself in short sentences: "Why shouldn't it be? . . . Is it absurd that . . ." etc. He has been at his previous asylum four years and three months. He knows the present month and year but is four days wrong in the date. He gives his age correctly. He did gardening at his previous asylum and got cigarettes from home and tobacco from "one of the officials, a young fellow there." It is impossible to get replies to questions unless he is asked sharply and rapidly, in which case he replies in kind, as otherwise he mutters to himself and takes little or no notice. Occasionally after a question he talks on apparently quite incoherently; the sentences are, however, short and grammatical, and it is probable that several intermediate ones are missed out in such a way as to render it impossible to follow the association of his ideas. He informs me that he passed all the standards at school. He was then a clerk for seven years, during which he lived in three different towns. He was only in his last situation three months. When he begins to reply to questions the answers come so rapidly, and his attention so quickly fails, that it is difficult to cerebrate rapidly enough to understand the replies and state another question in time to retain his fleeting attention, and render the conversation consecutive.

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At the time the above notes were taken the patient had exhibited no definite motor phenomena beyond partial stupor, and a general tendency to stubbornness when anything was required of him. In a few days, however, he was noticed to stand for long periods in forced attitudes, and to be aggressive and at times impulsive. Whilst under observation such phenomena were of common occurrence, and were especially noticeable at entertainments, etc. He would suddenly kneel on the floor with upraised hands, or stand in cataleptoid attitudes, and keep up these positions for long periods. Similar phenomena were also at times exhibited whilst at exercise. He was a worker of ordinary type but was at times untrustworthy, very stubborn, and aggressive. Mentally he continued quite unchanged, either cerebrating with extraordinary rapidity, or taking absolutely no notice of any questions put to him.

Verbigeration; Moderate Premature Dementia; certified twenty-one years.

CASE 597.—H. W—, male, single, æt. 42, porter; certified since the age of 21. Notes taken four days after admission.

A dull-looking man with bright, prominent eyes. Horizontal wrinkles on forehead. Palate is V-shaped and shelves forward. Teeth good but irregular. When asked his name he makes no reply. When his name is mentioned he replies "Yes, Yes." He then looks up, notices what I am doing, and smiles. Where are you? "No, No." Where are you from? "E—, E—." What is your name? "W—, W—." He thus replies readily to a question, of which shortly before he took no notice, as soon as he has begun to speak. What is your age? "Oh, I'm sure I don't know, sure I know." Are you married? "No, No, No, No." Do you know H—? (his previous asylum) "Yes, Yes, Yes, Yes." Have you any children? "No." Have you any children? "No, No, . . . No, No." Did you work at H—? "No, No, No." Do you smoke? "No, No." He occasionally smiles in a silly manner during the conversation. Did you strike any one at H—? "Oh, no! Oh, no!" and laughs. Were you in the padded room? "No, No, No, No, No." Nothing further can be got from him, and, if he is smiled at, he laughs in a vacuous manner.

Whilst under observation he was dull, stupid, uninterested in his surroundings, and unemployed, and required prompting, and at times assistance, before he would attend to himself and his bodily functions.

Partial Stupor; Attitudes; Mild Premature Dementia; certified five years; and showed symptoms for at least six years previously.

CASE 599.—A. S—, male, single, æt. 39, gardener; certified since the age of 34, but showed symptoms for at least six years previously. A paternal relative insane. Notes taken two days after admission.

Patient sits staring vacantly forwards and upwards, with the head thrown back, and the muscles of the front of the neck prominent. His lips are compressed, and at times he nods and slowly closes and opens his eyes. He is very slow in replying to questions, but gives his surname and his Christian name. He says that his age is 20. He knows

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where he is and where he has come from, and he states that he was in that asylum for four or five years. When again asked his age he repeats that he is 20. His limbs can be fixed in cataleptoid positions by stroking the necessary muscles, but these are not now (voluntarily) assumed.

Whilst under observation, the patient, as a rule, stood for practically the whole day long, in the same attitude, and, as far as possible, in the same places. By judicious and persistent prompting he would at times perform such simple mechanical acts as carrying coals, etc., and could similarly be got, and at times more readily, to attend to himself. Such actions as he performed resembled, in their absence of smoothness and refinement, those that might be carried out by a mechanical model. Whilst under observation the patient remained in exactly the same condition.

High-grade Amentia; Repetition of Movements; Simple Habit Tricks; Moderate Premature Dementia; certified eleven years.

CASE 600.—C. F—, male, single, æt. 39, labourer; certified since the age of 28. Mother insane. Notes taken three days after admission.

A vacuous-looking man, with a badly-developed lower face, teeth separated by gaps, and a large, partially bald, cranium. He constantly talks to himself and carries out habit-tricks, such as holding a piece of paper in one hand, and alternately turning it over, and moving the other hand up and down, to and fro, or round and round the piece of paper at some distance away from it. When asked to write his name he does so, but it is almost impossible to read what he has written, as he so exaggerates, and repeats over itself so many times, the beginning and end of each letter he writes. He also duplicates the "e" in "Charles." He writes his age as "35." Whilst writing "age" he seems quite unable to leave the "g" alone, and after writing the "5" he proceeds to cover it over with fine curled lines until the letter is practically invisible. This was probably owing to his not being prompted to write anything further, and to his being quite unable to take the pencil off the paper without being told to do so. As soon as the pencil has been taken from him he develops a vacuous grin of satisfaction. He is extremely garrulous. He is "not a married person, but I have a brother and sister married." He speaks inconsequently about asylums, convalescent homes, and sanatoria, and he asks me if this place is C— or M— (names of asylums). He thinks he has been away from town (H—) for about five years. Have you done any work? "With a piece of iron on a stock" (probably a farm or garden implement). He tends in his replies to questions to say the reply and then to spell it out, and he even at times repeats the spelling. Whatever he says or performs, he cannot leave alone, but tends to repeat the words or actions over and over again. During conversation he hardly ever stops twirling his right hand about or moving it around at different angles. When asked about hallucinations he replies: "People come close to me and give me stones, and I wet them in my mouth and spit them out."

Whilst under observation the patient was mentally unchanged, and he was practically useless as a worker.

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Note.—The tendency to repetition of movements, the simple habit-tricks, and especially the method of writing, which are exhibited by this patient, are worthy of attention.

Resistive Stupor; Impulsiveness; Mild Premature Dementia; certified five years.

CASE 603.—A. V—, male, married, æt. 34, brick-maker. Certified since the age of 29. Notes taken three days after admission.

A blank faced man who sits with his head bent forwards, or tries to turn away from me, or to get up and go away. As soon as he settles on his chair he looks downwards with wide open eyes and dilated pupils, and exhibits an intent expression which resembles that produced by fear. His attention can only be momentarily attracted, and when he is intently gazed at he gradually begins to exhibit tremor of the head and neck as a result of the great rigidity of his muscles. He is extremely resistive. There is no tendency to a cataleptoid state, but if the limbs are raised they remain in this position owing to their extreme rigidity. He either takes no notice of questions or replies quite suddenly, *e.g.*, "I sleep very well, sir." He therefore, at any rate, at times, hears and understands, and can reply to what is asked of him. When I tell him that I have done with him he gets up and goes at once.

Whilst under observation the patient continued unchanged mentally He was at times violent and impulsive and he was totally unemployed.

Note.—This case, in many respects, presents a great resemblance to Case 596.

Partial Stupor; Moderate Premature Dementia; certified two years, and previously at the ages of 25 and 23 years.

CASE 604.—P. T. M—, male, single, æt. 28, private in the army. Certified since the age of 26 years, and previously at the ages of 25 and 23 years. Notes taken four days after admission.

A sleepy man who looks up when told to do so, and who makes grimaces when asked to put out his tongue. He gives his name and states that his age is 24. He speaks in a whisper. At times he smiles in a vacuous manner, moving the left side of the face more than the right. He is very slow in replying to the simplest questions, and nearly all the information he supplies is either inaccurate or inapposite. When, for example, he is asked if he knows anyone here, he remarks "Plenty to do." He sits all day in one position and does not voluntarily move, even for meals. He does nothing for himself, frequently masturbates, and is wet and dirty in his habits. His bodily health is satisfactory.

Whilst under observation he gradually recovered from his stupor, and though very dull, phlegmatic, and uninterested in his surroundings, became a useful worker.

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Verbigeration; Echolalia; Moderate Premature Dementia; certified six years and previously at the age of 21.

CASE 605.—G. P. P—, male, single, æt. 30, grocer's assistant. Certified since the age of 24 and suffered from a previous attack at the age of 21. Aunt insane. Notes taken two days after admission.

A vacant-looking man who stares about him, occasionally smiles in an insipid manner, and fidgets with his hands. When asked his name he replies "P—, P—." Christian name? "Christian G— P—." Where are you? "Where am I?" He reads the name of the asylum when shown it. He came here "3—4—5 years ago," and still seems to think that he is in his previous asylum, though he points to and speaks the name of the present one. How old are you? "How old am I? 27—28, yes." He says that he can work, in reply to a question. At his previous asylum he worked in the garden? Did you get tobacco? "Tobacco. Yes, little pieces." Often? "Why, three times a week, yes." Do you hear people talking to you? "Yes, talk at night. Yes, they talk you know. Yes." He owns that he has been a troublesome patient, and uses such expressions as "Giving way," "Breaking out," "Smash," "Windows and such things," "Yes, Yes." During examination he has a piece of bread in his left hand, and he persists in holding it whilst he dresses.

Whilst under observation the patient showed no signs of mental change and was dull, listless, apathetic, and quite unemployed.

Semi-voluntary Cataleptoid State; Some Premature Dementia; certified nineteen years and previously in an asylum.

CASE 623.—C. R—, female, single, æt. 44, of no occupation. Certified since the age of 25, and had previously been in an asylum. Notes taken on the day after admission.

A woman with a dry skin, a mask-like face, and many fine, horizontal wrinkles on her forehead. She holds her hands, which are cold and blue, in more or less constrained positions. She grins in a silly manner at times. She sits up, puts out her tongue, and does generally as she is told. She otherwise sits quite still except for a more or less constant slow movement of the eyes, and an occasional smile. There is partial cataleptoid rigidity of the limbs. This is by no means marked, as occasionally, whilst I am moving her limbs about, a few (involuntary) movements of the extremities occur. Further, the limbs gradually fall to the bed under the influence of gravity, though if so placed as to be least subject to this force, *e.g.*, in the vertical position, or so curved as to be best supported by the resistance of tendons and ligaments, they remain for a considerable time practically immobile. Again, when one limb has been fixed, it tends to undergo relaxation when that on the other side is placed in a similar position. It is probable, therefore, that in at least many instances the cataleptoid condition is semi-voluntary. The patient takes no notice of questions, and except for an occasional smile, which at times appears to exhibit a certain degree of slyness, takes no interest in her surroundings.

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Whilst under observation patient continued unchanged. She was totally unemployed, but would feed and dress herself.

Verbigeration; Attitudes; Moderate Premature Dementia; certified thirty-one years.

CASE 628.—F. S—, female, single, æt. 51, occupation unknown; certified since the age of 20. Notes taken two days after admission.

A vacant-looking but restless woman, who mutters to herself and plays with her hands. She frequently strikes attitudes. She often makes such remarks as "Yes," "Yes, is it?" "Yes, is it?" "Say it," "Yes, is it? . . . it is," "What is it, no?" "Yes," "See," "To see," etc. When spoken to she becomes more restless, but she makes no replies beyond such as have just been stated. She often sits for long periods with her head bent forwards.

Four months later her condition was as follows: She is dull in appearance, and at times looks around her. She replies to questions by means of a few partially-intelligible words which are spoken smartly and in jerks—*e.g.*, "Yes, yes, three years," to a question as to where she is. Who is that? (a nurse) "Yes, yes, that is." What is your name? "I call." It is very difficult to catch what she says. She accepts such names as "Mary," "Susan," etc., although they are not correct. On one occasion, when asked why she did not reply, she said "because I wouldn't." She frequently strikes attitudes. She sits in one chair all the day long. She is noisy at times but does not swear. She never works. She occasionally undresses herself. She never reads or writes. She can find her way about the ward, but she never goes alone. She never asks to go to the lavatory, but she goes when the others do. In the mornings she partially dresses herself. She has once or twice been wet in her habits.

High-grade Amentia; Stupor; Salivation; Moderate Premature Dementia; certified four years.

CASE 632.—G. K—, female, single, æt. 26, domestic servant. Certified at the age of 22. Notes taken two days after admission.

A dull-looking woman of vacuous appearance. Some asymmetry of the face, the right eyebrow being higher than the left. Forehead very peaked, *i.e.*, each side falling rapidly away from the metopic suture. She sits with her hands doubled up, the thumb lying inside the flexed fingers, and takes no notice of her surroundings. She states her name in a childish whisper, and, when asked to write it, does so slowly and laboriously and in copy-book style, the details resembling those already referred to and described in previous cases as characteristic of patients who have learnt to write properly and have afterwards developed premature dementia. She rarely says more than one or two words in reply to questions, and usually merely whispers a "yes." She is very slow in replying to questions, and the responses are, as a rule, quite incorrect. She salivates a good deal. She feeds herself with a spoon and partially dresses herself. She is clean in her habits and follows the other patients to the lavatory.

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Whilst under observation the patient remained unchanged; she was dull, apathetic, semi-stuporose, and entirely unemployed.

High-grade Amentia; Attitudes; Explanatory Delusion; Some Premature Dementia; certified six years.

CASE 635.—A. L. M—, female, single, æt. 33, servant. Certified since the age of 27. Notes taken on the day after admission.

A morose-looking woman with a small moustache and beard, ears without lobules, and the general appearance, except for complexion, of a Red Indian. She states her name, speaking with a lisp, and gives her age as 36. She knows that she came here yesterday, where she has come from, and that she was in that asylum for six years and seven months. She informs me, in reply to a question, that she cleaned the bath-room whilst there, but she adds that it was not she herself who worked but a machine which walks about as her, because *she* would not do "county work." "This machine goes and walks about and does things I don't want to do." She has had the machine in her all her life. When asked about hallucinations she denies them, but she states that "men come about and pretend I am a person I am not." She knows the day correctly, and states that the month is "September or October" (October). She does not know the date or the year. She is spiteful, and has already several times spit and scratched. She is untidy as regards her hair. She is clean in her habits.

Four months later the patient continued unchanged. She usually sat still all day, or stood looking out of the window, and always in more or less forced attitudes, which she was constantly striking. She spit about a good deal and often rubbed it on her dress. She did no work, and though she dressed herself she neither did her hair nor made her bed. She was clean in her habits.

Note.—The simple explanatory delusion exhibited by this patient is worthy of attention.

Habit Tricks; Attitudes; Forced Movements; Moderate Premature Dementia; certified nine years, and previously at the age of 20.

CASE 636.—J. S—, female, single, æt. 40, housekeeper; certified since the age of 31, and previously at the age of 20. Paternal grandfather insane. Eldest brother, and also paternal uncle, committed suicide. Notes taken two days after admission.

Hair very thin (from a habit of pulling it out) Teeth very irregular. Palate high, narrow, especially in front, and shelves forwards. Lobules of ears deficient. No cracks on abdomen. Breasts very atrophous. Marked corns on right knee (from a habit of kneeling).

A dull, childish-looking woman, who sits quietly and pays little attention to questions. She sniffs almost continuously, and plays with and picks her fingers. What is your name? "Sally, Polly, Tommy, Jip," and laughs. She then, when the question is repeated, replies "Jane" (incorrect). "That's cherry tree they put in, your name, and turpentine and beeswax" (possibly objects she has recently noticed, as the gardens are being planted and the floors are being polished).

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She then mutters away to herself about "Polly Paine," "Lucy Mercer," etc. (names unknown). She cannot dress herself. She stays wherever she is placed. When she walks she keeps stopping and kneeling down on the right knee.

Some three or four months later her condition was substantially unchanged, being as follows: She picks away at her finger nails and takes no notice of me. If I try to attract her attention she says, "Don't do that," and goes on picking away as if absorbed in her occupation. At times she looks up and smiles in a shy manner.

She is very quiet but mutters to herself at times. She kneels down before she does anything—*e.g.*, on getting up in the mornings she kneels down and then stands naked for about half an hour. She does nothing for herself except as regards partial dressing, not even attempting to wash herself or do her hair. She is at times wet and dirty in her habits. If put in a certain place she, as a rule, stays there till she is moved, but at rare intervals she darts suddenly to the opposite side of the room. She often performs such actions as carrying out rolling movements with her fingers, or lying flat on her back on the floor for a minute and then getting up and kneeling on her right knee. She is stubborn over her food, which has to be more or less forced into her mouth.

Class (d).

Sub-class (3). *Premature Dementia—approximately "Paranoid."*

This sub-class contains seven cases, of which two are males and five are females. In spite of the small number of included cases, the writer is of the opinion, for reasons which are given below, that a "paranoid" sub-class of premature dementia is desirable for descriptive purposes, as he is convinced that the delusional cases now under consideration should not be included under either the "hebephrenic" sub-class, or under the class of "paranoia or insanity with systematised delusions," which is described under "Amentia" in Part II (*Journ. Ment. Sci.*, January, 1906, pp. 14—28).

With reference to the former the differences are obvious, and as he is here dealing, not with the precursory symptomatology of, but with developed examples of, premature dementia, a few words on this point will suffice. Cases belonging to the present sub-class exhibit relatively little confusion, and resemble ordinary examples of delusional insanity in the existence at their onset of a distinct and, at any rate, semi-systematised, persecutory stage in which hallucinations occupy a prominent place, and in their relatively slow progress; whereas, in the "hebephrenic" type of premature dementia, mental confusion,

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with hallucination as one of its symptoms, is the prominent feature, and more or less rapidly ends in a mild or moderate grade of dementia. In the case of hebephrenia also, if persecutory ideas arise in consequence of persistent hallucinations, they are multiple and unsystematised, and the patient, at the most, develops an explanatory delusion.

With regard to paranoia, on the other hand, the differences are less obvious, and the psychiatric description of these is somewhat difficult to give with clearness. The ordinary statement that paranoid cases are primarily dementias with a less systematised set of delusions is inadequate, as it is possible to reply that the earlier age of onset, and the consequent existence of a less stable and experienced cerebrum, result in the development of an abbreviated and less systematised set of delusions and in a more rapid course to dementia, and that, therefore, such cases are really examples of true premature paranoia.

The latter was at one time the opinion of the writer, but further experience convinced him that it was necessary to limit the term "paranoia" to a special type of case with systematised delusions, which possesses its sane prototype, as does amongst others another and simpler, but correlated, type of high-grade amentia, the insane "crank" (*Journ. Ment. Sci.*, January, 1906, pp. 14—28). Such cases exhibit anomalous psychic processes which are presumably of developmental origin, and mild dementia ensues only with the onset of cerebral involution. The remainder of the cases commonly classed under "paranoia" exhibit complex phenomena of association which arise under the influence of local disorders of lower association. These phenomena are probably indicative of neuronic dissolution in the particular centres of lower association which serve as their physical basis, and such cases frequently develop considerable dementia. Two such examples are described and discussed in an earlier section of this paper (*Journ. Ment. Sci.*, July, 1906, pp. 481—486). In paranoia, in the view of the writer, the centre of higher association is the primary region at fault, in that it is unable to exercise its normal functions of co-ordination of, and of corrective and selective control over, the centres of lower association. In the delusional cases, which he excludes from the group of true paranoia, various local disabilities exist in one or more of the centres of lower association, and these lead either to unharmonious action

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of these centres in relation to one another, or to more generally aberrant psychic processes, involving also the centre of higher association. The former condition is developmental, and the latter is evidence of local cerebral dissolution which slowly becomes widespread; and for the moment, for the sake of clearness, they may be spoken of as *developmental* and *dissolutive paranoia* respectively.

The cases contained in the present sub-class are of a similar type to the latter, and may be termed, for the moment, examples of *premature dissolutive paranoia*. Such cases occur at all ages and might conveniently be classed as examples of "paranoid dementia." The writer, however, prefers, owing to the fact that all grades of delusion exist in cases of dementia, from the unsystematised to the semi-systematised, or even the systematised, not to make use of any such general symptomatological division, although during the description of premature dementia he has found a sub-class of the kind convenient. His excuse for making an exception in the present instance lies in the fact that, of all the classes of primarily neuronic dementia, the amount of dementia is the greatest in the premature variety, in which, therefore, such a symptomatological division is both possible and convenient for descriptive purposes, although, from the general psychiatric aspect, it is undesirable. In other words—to render his position quite clear—whilst in premature dementia the few "paranoid" cases stand out sharply from the (usually more demented) "hebephrenic" and "catatonic" types, in the other varieties of primarily neuronic dementia no such "paranoid" group is evident unless *all* cases exhibiting unsystematised, semi-systematised, or even systematised delusions were included in this, to the exclusion of every other symptomatological characteristic. Under such circumstances, as so many further possible sources of delusion exist, owing to the more extensive mental content of the adult individual, a *reductio ad absurdum* would necessarily result.

The writer therefore limits the term "paranoia" to cases possessing anomalies of the higher psychic processes which are of developmental origin, and includes dissolutive delusional cases, with the above restriction of convenience, under the more general divisions of primarily neuronic dementia.

That this reservation is one of convenience only is clearly shown by the following case, which exhibits a symptomatology

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comprising motor phenomena—*e.g.*, the striking of attitudes, semi-voluntary cataleptoid states, verbigeration, and characteristic handwriting; stereotyped "paranoid" phenomena—*e.g.*, hallucinations and delusions of persecution and grandeur; and with these a moderate grade of dementia. The interest attached to this case is still further increased by the fact that a brother of the patient, now dead, had exhibited a similar complex symptomatology.

J. J. M— (Rainhill Asylum), male, married, æt. 41, iron-moulder, certified since the age of 32. Brother died in this asylum (see notes below); father and also other brothers intemperate.

Six months before admission patient suffered from influenza, and three weeks before admission he developed mental symptoms, which chiefly consisted of hallucinations of hearing.

On admission he was quiet, coherent, and rational, and his memory was fairly good. He was able to give a good account of himself. He stated that his wife had committed adultery, and that people could easily read his thoughts by means of some machine.

For some months he continued quiet and unobtrusive, and was somewhat depressed. He was much occupied with his hallucinations, but worked fairly well. He then became grandiose, stating that he owned millions of pounds, and that the Prince of Wales and others were trying to kill him by means of machines in order to obtain this money.

A few months later he became restless, excited, dangerous, and threatening, and was noisy and talkative, and much troubled by hallucinations of hearing and delusions concerning electricity.

Four years after admission he was still in a similar condition, and he suffered severely from hallucinations of hearing, the voices appearing to come from the ceiling and from under the floor. He stated that he was in the asylum as "J. J. M—," but that this man was tortured and killed two years ago, and that he had assumed his form and name. He therefore gave his age as two years.

He then for some time showed little mental change, but gradually came to speak of the voices as "crack-pots."

He continued in this condition for some three or four years, and then gradually developed characteristic motor phenomena and a fixed delusion of grandeur.

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He has now been in the asylum nearly ten years, and his present mental condition, in brief, is as follows:

He is a dull, listless man with a broad nose and a high and shelving palate. He is clean in his habits and a ward worker. He is at times noisy, and he is occasionally annoyed by what he calls the "crack-pots." He often stands motionless for long periods with his eyes closed, his mouth open, and his hands outstretched. He exhibits semi-voluntary cataleptoid phenomena. If, *e.g.*, one of his arms is raised, it remains where placed; if, then, the second arm is also raised, both arms remain for a long time rigid and motionless; if during this period the patient is suddenly told to open his mouth, he does so, and his arms at once fall down to the sides.

He replies readily to questions. He rejects his proper name, and states that his name is "King George," and when asked to write his name he slowly and laboriously indites "king George," carefully finishing off the letters and then returning to dot the "i" after he has finished. The style of hand-writing is in every way characteristic of that frequently referred to as occurring in premature dementia. When asked which "King George" he professes to be, he replies, "*Not* King George *III*; my name is King George only to you, sir." Age? "Unknown *Z*etland years of age I been dead" (*cf.* a delusion referred to already). "I came with a man named M—" (his own name). "I'm turned five years in this building, sir. Altogether here going for ten years. He came from W— on 7th or 8th October, ten years ago" (correct duration within two months). He knows the day and the exact date within a day, *i.e.*, "26th or 27th February, 1907, 1907 year to you, sir" (really 25th). When again asked his age he replies, "Unknown *Z*etland, Unknown *Z*etland, Unknown *Z*etland, if you know what '*Z*' means. Unknown *Z*etland. I have to go by '*Z*' to you sir. I have no father and no mother to you, sir." It will be noted that he ends many of his phrases with "to you, sir," and also verbigerates.

The brother of this patient exhibited a very similar symptomatology, which is, briefly, as follows:

He was nine years older than his brother, and was admitted at the age of twenty-nine years. He was married, and was a file-cutter. When admitted to Rainhill Asylum he was excited, and suffered from hallucinations of hearing concerning women

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and spirits, and from hypochondriacal delusions concerning his heart and stomach. He then became noisy, abusive, threatening, and violent, and suffered from marked auditory hallucinations and visceral delusions.

Two years later he often conversed with himself in an excited manner and suffered from hallucinations, he had numerous delusions regarding his present position, and he considered himself a supernatural being.

Shortly afterwards he began to develop cataleptoid phenomena, often remaining on his knees for hours in a partially dressed condition.

Five years after admission he stated that he had been in the asylum 20,000 years, that he was sixteen years of age, and that "spinks" were around him (*cf.* the "crack-pots" of his brother).

Seven years after admission he became dull and slovenly, and ceased to speak, work, or amuse himself. He also became dirty in his habits. Concurrently with this change in his mental condition, and probably as the cause of it, he developed tuberculous pleurisy, and he died of phthisis six months afterwards.

The remarkable resemblance between these two cases is too obvious to need further reference. The writer, however, as he made no personal observations on the latter, purposes to confine his attention to the former in the following remarks.

Such a case, though certified at the age of thirty-two years, would fall equally under the "catatonic" and "paranoid" sub-classes of premature dementia, in that it exhibits on the one hand, developmental and dissolutive motor phenomena, and on the other, complex dissolutive psychic products of paranoid type. The former of these have a physical psycho-motor basis, which justifies a symptomatological "catatonic" sub-class; the latter, except perhaps as regards the hallucinatory phenomena of lower association, have no such relatively simple physical basis, and therefore the formation of a "paranoid" sub-class, except as regards convenience, possesses no present pathological justification. Such a paranoid symptom-complex, in fact, occurring in a case which exhibits the typical characteristics of the "catatonic" sub-class of premature dementia, is, in the opinion of the writer, ample evidence that the "paranoid" state, in contra-distinction to "developmental paranoia," is simply indicative of a cerebral dissolution which involves both

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the individual neurones of the higher centre of association, and of several centres of lower association, and also, as a consequence, in a most intricate manner, the various intra-centric neuronic complexes.

He therefore holds that the "paranoid" state is a variable symptom-complex indicative of widespread, though not necessarily advanced, cortical dissolution, and that it is consequently undesirable to employ the term generally, either for gross symptomatological purposes, or to denote a psychiatric subdivision possessing a histo-pathological basis.

The small number of cases in the sub-class at present under consideration renders it impossible to draw conclusions of value with regard to degeneracy and dementia respectively. It may, however, be stated that three of the seven cases are high-grade aments, which is about the average occurring in the total class of premature dementia; and that two of the seven cases exhibit a moderate grade of dementia, which is much below the average occurring in the whole class.

Of the seven cases, four were workers (two good and two ordinary), one refused to work, and two were incapable of useful work.

The following five cases are appended for the purposes of illustration.

High-grade Amentia; Grandeur; Suspicion; Systematised Persecutory Delusions; Hallucinations of Hearing; Mild Premature Dementia; certified eleven years.

CASE 637.—A. A. S—, male, single, æt. 31, painter. Certified since the age of 20. Father insane. Notes taken on the day after admission.

Palate very high, very narrow, and shelves markedly forwards. Incisor teeth very prominent. Mouth open. Chronic disseminated tuberculosis of both lungs.

A thin, bright-eyed young man with a bad cough, who speaks with a slight lisp. He gives his name, and the year in which he was born, (presumably correct). He knows where he is, and says that he has never been in this neighbourhood before. He gives the correct day and date. He states the exact date on which he was first taken to an asylum, and states that he was there "just under 21 years." He presumably here refers approximately to his age when admitted. He gives the exact date on which he was transferred to the asylum from which he was admitted here. He was an "artist decorator" and served the whole of his apprenticeship, afterwards "jobbing about." "I pleased myself and suited the exhuberance of my own verbosity in going to C—," (his first asylum)—this remark being given in reply to a

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question as to the cause of his detention. He replies that he hears voices, but "I was all right, I was all right. I was keeping my eye open." He thinks it was a male voice, and he very seldom hears women's voices. He then states that "Electricity is life. As Dr. —, passed through the ward, he said 'Is that the line?' and I said 'not yet' and then he came parallel, and we seemed to go by train, didn't we? . . . But it's such a lot, its no use talking, except giving an idea of what we are talking about." He thinks the voices "are all to my good," also "my brain is touched and played on by electricity." Who does it? "That's a matter of the combination, one thing or another. Doctors must get well and so a patient must get worse" . . "I was much afflicted the first two months at C—. I had the battery put on."

Whilst under observation patient improved in health and became a moderately useful worker. Further conversations resembled that given above, and merely confirmed the conclusion, which had already been acquired, that the patient had previously elaborated a systematised group of delusions of a persecutory nature, but that his abbreviated modes of thought and expression, consequent on the development of stereotypism and mild dementia, rendered it impossible to obtain a complete account of their exact nature and mode of development. He was suspicious, conceited, and grandiose, and had a habit of showing very obviously that it was not worth while troubling, and might even be risky, to give detailed descriptions of his experiences, which could not be comprehended and might readily be misunderstood by his interlocutor.

High-grade Amentia; Delusion of Grandeur; Moderate Premature Dementia; certified seven years.

CASE 638.—G. P. T—, male, single, æt. 29, of no occupation. Certified since the age of 22. Notes taken two days after admission.

A fatuous-looking young man with a small upper lip. He gives his correct surname, and when asked his Christian name he remarks, "Whatever you like to call me." He does not know where he is or what is his age, but, hearing a piano, he remarks, "It's a good-toned piano, that is." Can you play? "Oh, yes." He states that he was born in P— workhouse and used to scrub floors there. He tells me that his father and mother were Mr. and Mrs. M—. He is extremely dull, silly, and fatuous, and the information he supplies is quite untrustworthy. For example, he previously did not know his age, but when asked later he replies "22." He says that he went to school, so I ask him to write his name, which he has previously stated correctly. He takes the pencil in his hand readily, but slowly, and, after licking it, he painfully and tediously writes as follows:—



He informs me that this is really his name, that it is a "Christian name," and that he has to keep writing it so as not to forget it.

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Whilst under observation he remained dull, fatuous, and listless, and could not be persuaded to do any work, though he would attend to his own wants. When requested, he would write his name as above.

Note.—The case is an unusual one, and owing to the amount of dementia present it was not possible to determine the method by which the patient had arrived at his fixed idea, which, curiously enough, he could only be got to express in writing. The writing is similar to that already several times mentioned as characteristic of premature dementia. The general behaviour of the patient, as already stated, was that of a moderate dement, and not that of an imbecile, though the patient was obviously a degenerate. The case, after consideration, has therefore been placed in its present position, as an example of the delusional type of premature dementia in a patient of originally defective intelligence. The writer has been influenced to adopt this view owing to having seen more than one case of similar type, and, notably, a patient of originally defective intelligence who thought that he was heir to the throne and son of the late Queen. This patient was firmly convinced of the truth of his delusion, although he could give the names of his father and mother, and was able to inform me that they had both been dead some years. (The late Queen was then alive.) When confronted with this discrepancy he was not in the least disconcerted, but talked fluently and inconsequently about his "family likeness to the Georges," etc.

Delusions of Grandeur; Mild Premature Dementia; certified five years.

CASE 639.—A. E. R—, female, married, æt. 30, charwoman. Certified since the age of 25, and showed symptoms since the age of 24. Notes taken on the day after admission.

The teeth are very irregular. The palate is very high, narrows remarkably anteriorly, and then rapidly shelves forwards. The ears have no lobules. The finger nails are bitten into the quicks. There are no skin cracks on the abdomen, and the breasts are nulliparous.

A lively-looking woman with a very smooth forehead and bright eyes. She informs me that her name is Mrs. L—, and that she became Mrs. L— whilst at G— (the asylum from which she has been transferred). Mr. L— is a lawyer at H— (her native town), and she used to know him when she was a girl at school. She thinks that he died six months ago. She was married by telephone in his hospital at H— two and a half years ago. Mr. R— (her present husband) died 10 or 12 years ago, and two days after his death she was married to the Czar of Russia because she was an adulteress. She was then the Czarina of St. Petersburg. When asked about the asylums in which she has

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resided she informs me that she lived "$3\frac{1}{2}$ years next November at G—, might be longer." She went there from C—, in which she had lived three and a half years. (She has only been certified five years.) When leaving home "I was to go to Windsor Castle to go to the palace at Constantinople and if not there to St. Petersburg or Germany but they sent me to C— instead." She knows the present day and the day on which she came here, but she guesses the month as "June or July" (August), and she does not know the present year. She then becomes garrulous, and amongst her remarks a question as to whether she has had any children elicits the following: "I have three living children as I know of but they are in Zululand doing well. Two little boys with golden hair and one little girl. I had a boy and a girl before but they had fits. One was a sailor and one was a soldier," etc. No clear persecutory stage prior to her present condition of grandeur could be elicited.

Whilst under observation the patient remained mentally unchanged, and she was a willing and useful worker.

Delusions of Persecution; Hallucinations of Hearing; Premature Dementia; certified seven years.

CASE 641.—M. E. G—, female, single, æt. 31, servant. Certified since the age of 24. Notes taken three days after admission.

A somewhat depressed woman, who says she is rather unsettled owing to coming here, but has nothing to complain about. She gives her name and her age correctly. She says that to-day is Wednesday (Thursday), and that she has been here a few days and came on Monday (correct). She knows the month but not the date. She complains that she received no wages except an occasional penny, and money from her friends, whilst at C— (the asylum from which she has been transferred). She states that she was there for seven years. She acknowledges that she suffers from auditory hallucinations, but "I refuse to attend to them." They are "in my head, but I will not attend or they would run away with me. It is very hard to have this trouble but I try to bear it." "They repeat my thoughts and seem to know them. They connect with me in some way and are not to be seen only heard. They would paralyse me if I would allow them the power. There are two or three of them, and it sounds like a man or woman. *If I think of a thing I hear the words back.*" As an example, she tells me that *if she thinks of my name she hears it repeated by them in her head.* She left her home at H—, as she was ill owing to this persecution. "I suppose it is someone I have done harm to, but it is anyway a very unnatural sound. I have been well brought up and I feel that it is hard on me." She finally, when asked about work, informs me that she can wash up, cook meals, or do anything, and she says that she is willing to do so.

Six months later her general condition was substantially unchanged, being as follows: She is dull and phlegmatic, and smiles in a fatuous manner when addressed. She knows the day, the date, and the date on which she came here. Voices? "I hear them but I don't listen to

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them." When? "Any time." "I answer myself . . . thoughts." She is more secretive regarding her experiences than she was six months ago. She works in the ward kitchen, and works well at times, but as a rule she is very slow. She would like to attend to the kitchen by herself, but she is too slow. She is also slow over eating her food. It is always necessary to look after her in order to see that her work is properly performed. She talks to herself, and if she thinks she is alone she speaks quite loudly. She, as a rule, ceases when she is observed. She is very fond of hoarding rubbish. She reads newspapers and books and writes letters. She talks fairly sensibly on ordinary subjects, and would be a useful worker if she had more initiative.

Note.—This patient resembles in every essential respect certain cases which exhibit complex psychic products, due, probably, to local disorders of the regions concerned with lower association, and allied to, and usually considered one of the types of, paranoia. Two of these cases are described and discussed by the writer in an earlier section of this paper (*Journ. Ment. Sci.*, July, 1906, pp. 481–486). The present case commenced at an earlier age, namely, twenty-four, whereas the others had well passed the third and fourth decades respectively. The patient has developed considerable dementia, and this disability, her sex, and her lesser intelligence and education, are probably conjointly responsible for the absence in her case of a grandiose stage, for this stage in such slowly-developing cases occurs late, and is arrived at by a process of more or less elaborate reasoning. The present case thus rightly falls, in the view of the writer, into the "delusional" or "paranoid" sub-class of premature dementia.

High-grade Amentia; *Delusions of Grandeur*; *Hallucinations of Hearing*; *Moderate Premature Dementia*; *certified eighteen years.*

Case 643.—M. A. S—, female, single, æt. 41, domestic servant. Certified since the age of 23. Notes taken two days after admission.

An excited woman, with numerous stigmata of degeneracy, who talks extremely rapidly and almost without cessation. She was sleepless all last night, and refused her breakfast this morning. She at once informs me, when I ask her her name, "I thought I was a boy some years ago and if I had anything to do with a girl I don't know what they would say." She tells me that her age was "31 on 30th September." She knows when she came and the day and the date, and states, "I have come from a house where there is a girl named C— P—" (correct). She then rapidly and almost unintelligibly gabbles on about Queen Victoria, the Government, the Prince of Wales, etc. She speaks so rapidly, and it is so difficult to retain her attention, that it is nearly impossible to obtain any further information

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from her. She left home in 1876 (incorrect). She hears voices, but "not much. They talk about throwing chamber-pots." She then talks of Holy Communion, etc., and speaks so rapidly and so indistinctly that a satisfactory specimen of her conversation cannot be obtained, although each phrase seems to follow the previous one in a coherent, if inconsequent, sequence.

Six months later her condition showed no substantial change, and was as follows: She talks continuously, and appears to be telling her history, but, though the individual phrases are correct, the whole is a most unintelligible conglomeration, which, however, *sounds* sensible. At times she gives quite sensible replies to questions, and then runs on again. She knows the day, but not the month, apparently from non-attention. She breaks away too frequently to allow of any satisfactory history being obtained from her. She says that her illness began at the age of 16, and that she is an actress and is to marry the Prince of Wales. She often mutters to herself or shouts to voices, and at times apparently to the Prince of Wales. She is often threatening in manner, but she never strikes. She reads, but never writes letters. She sews and rubs and dusts and makes beds, etc., at times, but becomes noisy when asked to work, and says she is told not to do it as she is a person of importance and keeps servants here. She never works unless asked to do so, and then only under protest. She is clean in her habits, but is very fond of picking up food with her fingers.

Note.—In the description of this case, owing to her rapid speech, it was impossible to reproduce the evidence, which was constantly being exhibited, that she was not a mere degenerate, but had lived outside and had seen a good deal of life before her incarceration. She had obviously suffered a certain amount of mental deterioration, and the frequent glimpses of a grandiose condition which she exhibited, together with the absence of the dulness and apathy of the simple case of premature dementia, have led to her inclusion in the present sub-class.

(1) The writer is, of course, perfectly aware that "Frankenstein" was the maker of the monster and not the monster itself. As, however, Mrs. Shelley omitted to supply the latter with a name, he sees no reason why it should not be granted the modern privilege accorded to motor cars, etc., and therefore christens Frankenstein's creation after its maker. This explanation is inserted lest the writer's name should be added to the list of those who, for the greater part of a century, have been pilloried for the perpetration of the "Frankenstein blunder."

(To be continued.)

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