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DIAGNOSIS AND PROGNOSIS IN PSYCHIATRY:

WITH A FOLLOW-UP STUDY OF THE RESULTS OF SHORT-TERM GENERAL HOSPITAL THERAPY OF PSYCHIATRIC CASES.

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PSYCHIATRY, during the past fifty years, has had a phenomenal but in some respects a rather unfortunate growth. Long in what Auguste Comte called the mystical state of the evolution of a science, psychiatry rapidly entered into its taxonomic phase when, as one of the later repercussions of the romantic reaction to eighteenth century materialism, the rightful place of psychiatry among the sciences of the humanities began to be appreciated. Almost simultaneously, however, premature efforts began to be made by students in the field to achieve higher levels of scientific development, with the result that the facts of psychiatry soon became almost lost in rigid and increasingly complex systems of classification. Fortunately, in recent years there has arisen a salutary tendency among psychiatrists to review the data of their discipline, and to re-examine the pragmatic and heuristic validity of certain formulations that too readily, perhaps, had been taken for granted. Among these attempts at re-orientation may be mentioned: as to ætiology and psychopathology, the work of Freud and the psycho-analytic school; as to a valid nosology, the statistical researches of T. V. Moore and others; and as to clinical application, the objective, critical studies of the results of various methods of diagnosis and therapy appearing with increasing frequency in the recent literature. We hope that the present work will be a contribution to the movement of fundamental reorganization now evident in psychiatry and its related fields of study.

Subject and Methods.

It is our purpose in this paper to present an objective and detailed analysis of the diagnostic work-up and the results of therapy of 100 patients admitted to the Psychiatric Division of the University of Chicago Clinics. During

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the period of hospitalization each patient received a thorough physical and psychiatric diagnostic study, after which he was followed by out-patient and social service contacts for a year or more in order to check the validity of the diagnosis and prognosis originally made and the effectiveness of the various forms of therapy employed.

Methods of Recording and Analysing the Data.

To facilitate the tabulation of the great mass of material (comprising over 18,000 items) included in this investigation, it was found necessary to devise a standard classification and an index code by means of which the data relative to each patient could be entered in ruled columnar forms for analysis. The categories used were the following:

(A) Preliminary Data.—Name of patient, serial unit number, dates admitted and discharged, age, educational level, marital status and source of referral to the clinics.

(B) Anamnesis.—Notes as to the context and reliability of the case-history and the designation of the relative value of the anamnestic information obtainable from various sources. Special sections of the history selected for specific analysis in this study were:

(1) *Heredity*.—Occurrence in the grandparents, parents, siblings or children of the patient of criminality, epilepsy, mental deficiency, neuroses, psychoses or suicide. Reasonable care was taken to confirm the reliability of the information obtained under this heading, but no attempts were made to trace elaborate genealogies or to make the studies exhaustive.

(2) *The presence and nature of behaviour difficulties in the patient's childhood*.—The code for this column included alphabetical symbols for 28 common early neurotic manifestations, such as feeding difficulties, lying, phobias, excessive shyness, truancy, temper tantrums, etc. These were entered whenever possible, with notations designating the ages of the patient at which the various aberrations of behaviour first occurred and the ages at which they improved or disappeared.

(3) *An entry as to the validity of employing any of the common designations of "personality"*.—When this seemed at all justifiable, one or more of the following terms were coded: Aggressive, cyclothymic, infantile, neurotic, perfectionistic, puerile, psychopathic, rigid, schizoid and syntonic.

(4) *An entry as to accuracy and value of anamnestic data obtained with the patient in a state of semi-narcosis* induced by the intravenous injection of small doses (0·1 to 0·3 grm.) of sodium amytal.

(C) Analysis of the Present Illness.—This included:

(1) *Duration of the illness.*

(2) *Nature and severity of the somatic symptoms* as subdivided into (*a*) disturbances of function in the various organ systems—cardio-respiratory, gastro-intestinal, genito-urinary, muscular or vascular; (*b*) abnormalities of speech; and (*c*) various dysæsthesias of touch, pain, special sense, etc., that could not easily be included elsewhere.

(3) *Abnormalities of the mental status*, recorded as (*a*) definite disturbances in emotional tone and attitude; (*b*) content and severity of compulsions, obsessions, phobias, depersonalization phenomena, etc.; and (*c*) evidences of intellectual deterioration.

(4) *Degree of initial insight.*

(5) *Disturbances in the behaviour of the patient*, coded under 42 common descriptive headings, such as lassitude, mannerisms, hyperactivity, exhibitionism and so on.

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(D) ÆTIOLOGY OF THE PRESENT ILLNESS.—This was analysed under the following headings :

(1) *Psychogenic factors*.—The evaluation, on the basis of the data furnished by the anamnesis and the examination of the patient, of the nature and intensity of the intrapsychic conflicts that could be presumed to have been important in the formation of the patient's neurosis or psychosis. These conflicts were nearly always found to be complex and interrelated ; however, for the purposes of this study they were classified as to immediate source under the following categories : Economic, familial, marital, occupational, religious, sexual and social.

(2) *Organic factors*.—These included the influence of nutritive or other physical depletion, drug intoxications, and the presence of organic disease of the central nervous system or other organs as revealed by clinical or special diagnostic studies.

(E) DIAGNOSIS.—At the end of their stay on the Psychiatric Division, the patients were diagnosed in conformity with the nomenclature and definitions of the National Committee for Mental Hygiene (*Statistical Manual*, Utica Hospitals Press, 1934), and for the purposes of this study were listed in separate forms under the following headings of " pre-follow-up diagnosis " : (1) Adult maladjustments ; (2) anxiety states (including anxiety hysteria) ; (3) the conversion hysterias, with their subdivisions ; (4) manic-depressive psychoses ; (5) mixed psychoneuroses ; (6) obsessive-compulsive states ; (7) paranoiac psychoses ; (8) psychoses with drug intoxication ; (9) psychoses with disease of the central nervous system (vascular, luetic, neoplastic or traumatic) ; (10) psychoses with organic disease ; (11) psychopathic personalities ; (12) schizophrenia. In addition, the sub-classification of the patients at the time of their discharge from the hospital was noted on each form in a column devoted to the purpose.

(F) INTRA-MURAL TREATMENT.—The individual effects of various types of therapy were, of course, difficult to evaluate, since all patients were subjected alike to a regime of rest, regular hours, sedation as needed, and the more or less beneficial influence of the routine of the Psychiatric Division. Nevertheless, in a great many cases the following were judged to have been (or to have failed) of specific influence on the mental status of the patient and were therefore coded in special columns : (*a*) Prolonged narcosis, (*b*) hypnosis, (*c*) hydrotherapy, (*d*) medical therapy, including the administration of glandular extracts, (*e*) surgical procedures, (*f*) superficial psychotherapy (persuasion, suggestion, etc.), and (*g*) a modified form of the Weir-Mitchell " rest cure ". In four cases formal psycho-analyses were begun, but the final results in this group cannot as yet be evaluated.

(G) RESULTS OF INTRA-MURAL TREATMENT.—To furnish an objective estimate of the results of hospital therapy in the various patients the following system of codification and grading was adopted :

Grade	
−1 to −5.	Illness grew worse in behaviour and mental status.
,, 0	No change.
,, 1	Improvement in co-operation and acceptance of nursing care.
,, 2	Some amelioration of complaints, but improvement unstable and insight absent.
,, 3	Better *rapport* and more definite improvement in symptoms, with admission on the patient's part of the presence of psychogenic factors in his illness.
,, 4	Almost complete relief of symptoms, with a moderate degree of insight into the mental conflicts that had previously arisen over external maladjustments.
,, 5	Complete and apparently stable recovery from physical and mental symptomatology ; emotionally adequate insight into the inner determinants of previous neurotic behaviour and the ability to make rational plans for the correction of previous emotional maladjustments.

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(H) PROGNOSES AT DISCHARGE.—These were classified under the following headings: (*a*) Discharged against advice; (*b*) institutionalization required (specific reasons, such as suicidal and homicidal danger, were coded); (*c*) patient expected to get worse (" –1 " to " –5 "); (*d*) patient expected to remain *in statu quo* (" 0 "); (*e*) recovery anticipated under favourable circumstances; (*f*) recovery prognosticated, the extent of relief from symptoms and the degree of personal and social readjustments being indicated by code gradings of " +1 " to " +5 ".

(I) EXTRA-MURAL THERAPY AND FOLLOW-UP.—This section of the study included entries on the following topics:

(i) *Number of visits to the out-patient department.*

(ii) *Extent of the co-operation of the patient and his family with the recommendations of the Clinic.*—In this connection the reasons for the varying degrees of co-operation of the patient and his family in the treatment were analysed under special headings, such as: (*a*) That the patient or his family disliked the physician or social worker; (*b*) disliked the treatment; (*c*) resented the stigma of attending a psychiatric clinic; (*d*) felt well enough to discontinue visits; (*e*) believed the disease organic; (*f*) believed disease psychogenic, but that the physician " didn't understand it ", or that it " couldn't be treated "; (*g*) selected another physician or psychiatrist; (*h*) adopted cult healing (chiropractic, Christian Science, etc.); (*i*) " could not afford return visits ", and so on. In every case, moreover, an attempt was made to interpret the emotional dynamisms that underlay the patient's or his family's resistance to accepting further contact with the Clinic.

(iii) *Environmental readjustments.*—In all cases in which these were recommended an investigation was made, either through social service contacts or psychiatric interviews with the patient and his family, as to (*a*) how far the suggested alterations in home environment, social contacts, type of work, etc., had been put into effect, and (*b*) how these changes had influenced the patient.

(J) FINAL FOLLOW-UP STUDIES.—At least a year after every patient's discharge from the clinics he was re-investigated as follows:

(i) A psychiatric interview was arranged by telephone, letter or social service contact, and at this interview specific information was gathered with regard to (*a*) the patient's somatic physical complaints and status as compared with those at the time of his entry into the hospital; (*b*) changes in his mental symptoms; (*c*) the degree of " insight " the patient had developed with regard to his previous and present emotional difficulties (under this heading a special study was made of the specific factors in therapy to which the patient credited his recovery and to what deficiencies in his treatment he attributed his lack of improvement; (*d*) the degree of readjustment (familial, sexual, marital, occupational and social) that the patient had achieved at the time of the final interview, and the amount of subjective satisfaction or dissatisfaction that these readjustments had occasioned; (*e*) the development of previously unrecognized organic disease; and finally, (*f*) whether, after a careful consideration of the course and status of the patient, it was necessary to modify the original diagnosis and prognosis made at the time of the patient's discharge from the hospital.

(ii) Whenever indicated, the above information was verified or corrected by correspondence or interviews with informed relatives or friends of the patient, investigations by social agencies and reports from physicians and other sources.

Statistical Data.

Since, during the course of this study, it was found impossible, for various reasons, to obtain satisfactory information of the end-results of therapy in 14 patients, the total number of cases finally listed in our compendium was 114. The statistical data in these cases are shown in Table I, from which, in summary, the following generalizations can be made.

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TABLE I.—*Statistical Data of 114 Patients Studied in the Psychiatric Division of the University of Chicago Clinics.*

Diagnostic Group	No. of Cases	Male	Female	No. of days in Hospital: Range	Mean	Age: Range	Mean	Education: Av. Grade Attained	Professional	Marital Status: Single	Married	Separated	Divorced	Widowed	Religion: Protestant	Catholic	Jewish	Christian Science	Other	Sources of Referral: Self	Family	Outside Physician	Social Agencies	University Clinics	Psychiatric O.P.D.
Adult Maladjustment	4	2	2	8-24	15	18-31	25	10		2	1		1		2		2			1		1		2	
Anxiety State	9	3	6	7-39	11	17-42	29.6	12		5	3	1			5	3	1			1				6	2
Conversion Neurosis	15	0	15	4-90	39.5	24-49	35	8.5		5	7		2	1	7	5	2	1		2		1	1	10	1
Manic-Depressive Psychosis	9	2	7	4-39	19.7	17-42	29.9	12	2	4	5				5	2	1	1		1	1	1		2	4
Mixed Psychoneurosis	6	0	6	3-79	25.1	22-33	26	12.5		4		2			3	1	1		1		1	2		1	2
Obsessive-Compulsive Neurosis	2	0	2	20-162		36-41	38.5	11		1	1					2				1				1	
Paranoia	1	1	0		9		35	8				1			1										1
Psychosis with Drug Intoxication	2	1	1	8-14		26-40	33	8			2				1	1				1				1	
Psychosis with CNS Pathology	17	7	10	1-66	26.1	18-62	45.2	9.5	1	3	10		2	2	15	2				2	3	4		7	1
Psychosis with Organic Disease	1	0	1		9		14	7		1					1										1
Psychopathic Personality	16	8	8	1-74	22	18-47	28	13.5	2	11	5				12	2	2			3	2	4	3	2	2
Schizophrenia	32	12	20	1-244	34.4	15-42	27.5 ±1.13	11.8	7	23	8		1		10	6	13	1	2	1	13	7	4	5	2
Means ± Probable Error, or Totals	114	36	78		24.2 ±1.5		28.7 ±.68	10.4	12	59	42	4	6	3	62	24	22	3	3	13	20	20	8	37	16
Column Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25

Sex.

Seventy-eight of the 114 patients were female, the groups of hysteria, obsessive-compulsive neurosis and mixed psycho-neurosis being composed exclusively of women.

Length of Stay in Hospital.

This ranged from 1 to 244 days, with a mean of 24·2 ± 1·5 days. Reflecting the particular research interests in the Clinics during this period, two groups significantly exceeded this mean—conversion hysteria, with an average of 39·5 days, and schizophrenia, with 34·4 days.

Age.

The age of the patients included in this study ranged from 14 to 62, with a mean of 28·76 (± ·68 P.E.) years. The schizophrenics were, on the average, somewhat younger (27·5 ± 1·13 years), but not to a statistically significant degree (mean difference = 1·26 ± 1·35 years). As may be seen, the only individual diagnostic group that deviated significantly in mean age (45·2 years) from the others was that of the psychoses with pathology of the central nervous system.

Education.

In conformity with the social class generally served by the University of Chicago Clinics the educational level of our patients was comparatively high, the average length of schooling being 10·4 years. Included in the study were 12 individuals of professional standing: several teachers, a dentist and four doctors of philosophy. Of the professional group, seven were diagnosed as schizophrenic. However, there were no statistically significant differences among the mean educational levels of the various diagnostic groups.

Marital Status.

In the schizophrenic group, 12 of the female patients were single and 6 married, whereas 11 of the male schizophrenic patients were single and only 2 were married. This distribution obtained also in the group diagnosed "psychopathic personality". In the series as a whole, exclusive of the organic psychoses, a similar, though less marked, preponderance of the ummarried prevailed; thus, of the 78 females, 38 were single, 3 were separated from their husbands, 2 were divorced, 1 was widowed, and 21 were married; whereas 25 of the 38 male patients were single, 1 divorced, 1 widowed, and only 11 were married.

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Religion.

Of the 114 patients included in this study, 60 were Protestant, 24 Catholic and 22 Jewish, whereas the 9 others professed various faiths, such as Christian Science (4 patients), " Ethical Culturism ", etc. Compared to the incidence of people of the Jewish religion in the general population the preponderance of Jewish patients was marked, especially in the schizophrenic group, where 13 of the 32 patients came from Orthodox Jewish families.

Sources of Patients.

It was considered of interest to trace the sources of referral of the patients admitted to the Psychiatric Division of the University of Chicago Clinics as a possible index of condition that would be likely to obtain in similar psychiatric clinics elsewhere. Of the 114 patients studied, the greatest number, 39, were transferred to the psychiatric division from other services in the Clinics, predominantly from the gastro-intestinal and neurological divisions. The sources of the other patients were as follows : 19 were brought by their friends or family, 18 were referred by private physicians, 16 by the psychiatric out-patient department and 7 by other psychiatric clinics, whereas only 13 of the entire group came of their own volition directly to the psychiatric division.

Sources and Value of the Anamnesis.

In evaluating the relative significance of the anamnestic data obtained from the patient, his friends, his family or other sources, an attempt was made by the examiner to eliminate as far as possible his own subjective bias, psychoanalytic or otherwise, and to grade the value of the information obtained according to whether or not it dealt directly with important psychogenic and organic factors, as later shown by (*a*) a thorough study of the individual patient during his hospitalization by the staff of the Psychiatric Division, and (*b*) an objective evaluation of the course and eventual outcome of the case. Although, of course, such interpretations were in many cases still open to question, the following inferences as to the sources of anamnestic material (Table II) seem worthy of formulation :

(1) In 78% of the subjects of this study (excluding those in the organic and definitely schizophrenic groups) it was possible, by employing a technique of frequent interviews and the cultivation of *rapport*, to obtain from the patient himself a history sufficiently detailed and significant to explain with relative clarity the symbolisms and meanings of the most important organic dysfunctions, and to indicate with some probability the deeper unconscious dynamisms of the patient's neurosis. Thus, in only 15 cases of the entire series was additional information from the family or other sources necessary for these purposes (Table II, columns 2 to 4).

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TABLE II.—*Relative Significance of the Anamneses Obtained from Different Sources in 114 Patients in Various Diagnostic Groups.*

Diagnostic Group	No. of Patients	Average Value of History from[1]			Amytal Hypnosis							Duration of Present Illness in Months	
		Patient	Family	Other Sources	Total No. of Cases	Value of History Obtained under Amytal in Individual Cases[1]						Range	Mean
						0	1	2	3	4	5		
Adult Maladjustment	4	3	3	1	1		1					5-84	40
Anxiety State	9	3	2	1	1				1			5-36	12
Conversion Neurosis	15	3	2	.5	2	1			1			4-216	55
Manic-Depressive Psychosis	9	3	2	1.5	6	2		2	1	1		1/4-168	27
Mixed Psychoneurosis	6	2.5	2	1.5	1	1						8-84	41
Obsessive-Compulsive Neuroses	2	1	1		1				1			48-100	74
Paranoia	1	4	3	1									36
Psychosis with Drug Intoxication	2	2	3	2								22-96	59
Psychosis with CNS Pathology	17	1	3	3	3	2			1			1-240	36
Psychosis with Organic Disease	1	1	3	2									14
Psychopathic Personality	16	3	3	3	4	1		1	1	1		1-120	48
Schizophrenia	32	1.5	2	2	19	6	5	3	2	2	1	1-360	13
MEANS OR TOTALS	114	2.3	2.4	1.5	38	13	6	6	8	4	1		38
Column	1	2	3	4	5	6	7	8	9	10	11	12	13

[1] Average value of history in Columns 2 to 4 and 6 to 11 graded on a scale ranging from "0" to "5"

(2) In the groups of organic and toxic psychoses, sources of data other than the patient himself were, of course, essential. The same held true for the initial investigation of "psychopathic personalities", many of whom at first persisted in concealing or distorting biographical information. Nevertheless, it is significant that even in this group of patients the majority (roughly 65%) furnished illuminating and verifiable histories after a sufficient degree of favourable relationship with the psychiatrist had been established.

(3) As might have been expected, the greatest difficulty in obtaining satisfactory histories was encountered in the group of 32 schizophrenic patients, 17 of whom gave histories so fragmentary, distorted or incoherent as not to permit of valid psychodynamic reconstruction. However, precisely in these patients was the induction of mild hypnoidal states by the intravenous injection of small doses of sodium amytal most successful in elucidating significant anamnestic material. The methods and results of this procedure may be summarized as follows :

Sodium amytal hypnosis—This was employed in 38 patients whose conscious defensiveness was so marked or in whom the repression of intra-psychic conflicts was so deep that little or no inkling of the psycho-dynamisms of their illness could be obtained even after many interviews. Briefly, the method consisted of the injection, at a rate not exceeding 1 c.c. per minute, of from 1 to 3 c.c. of a 10% solution of sodium amytal into a cubital vein of the patient until he manifested signs of some suspension of inhibitions, as shown by a return of facial expressiveness and a release of affectively coloured responses in ideation and speech. In unsuccessful cases these signs were transient or absent, the injection of more sodium amytal merely bringing on torpor, stupor, and finally sleep. While the technique, value and disadvantages of hypnosis by sodium amytal will be more fully considered in a separate paper, the following results seem pertinent to the present report (*cf.* Table II, columns 5 to 11) :

(1) In the 38 cases in which this method was tried, it was completely unsuccessful in 13 (column 6).

(2) In 12 others, conversation with or questioning of the patient while he was in the state of semi-narcosis induced by the barbiturate led to the amplification and significant interpretation of data previously obtainable only in a sketchy or incomplete fashion (columns 7 and 8).

(3) In the remaining 13 cases, in all of whom the usual methods had been almost completely ineffective in obtaining an adequate history, the injection of sodium amytal was successful in eliciting not only the usual anamnestic data, but also memories of subjective emotional experiences that were of prime significance in indicating and elucidating the origin and nature of many of the patient's psychogenic conflicts. While 8 of the cases in which amytal narcosis was successful to this degree were classified as schizophrenic, the method proved useful in

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other types of psychoses, including the organic, and also in the neuroses (*cf.* Table II). Contrary to current concepts, therefore, the effects of amytal narcosis are not of differential diagnostic value.

Comment.—The intravenous injection of sodium amytal has been employed by many workers (*cf.* bibliography under " amytal ") as a means of obtaining a history or of establishing *rapport* with the patient. However, in nearly all previous methods the drug was used in quantities large enough to cause either light sleep or deep narcosis, during the induction of or recovery from which attempts were made to establish contact with the patient. In contrast, the drug, as employed by us, was given in minimal amounts, eliminating the dangers of narcosis and overdosage. The technique here described, therefore, has the advantages of direct control, rapid induction, comparative safety and ease of repetition, but, as stated, it was successful in only about half of the cases in which it was employed.

Duration of Present Illness.

Because of the wide range of the data (Table II, columns 12 and 13), no definite significance can be attached to a comparison of the average " duration of the present illness " in the various diagnostic groups ; however, as an example of *post-hoc* nosological inference it is interesting to note that the group of " psychopathic personalities " is credited with the longest mean " present illness ", viz., twelve years. Of more striking significance is the fact that the obsessive-compulsive patients suffered from their symptoms for an average of nine years before seeking help, whereas psychiatric treatment was sought for our group of schizophrenic patients by their families or friends within an average of only thirteen months after the overt appearance of the illness. One possible conclusion to be derived from this comparison is that in the fairly intelligent middle-class population from which most of the patients were drawn, psychotic symptoms are already recognized as indicating the need of attention by a " mental doctor ", whereas, unfortunately, obsessions and compulsions are, in many instances, still considered simply as personal eccentricities and not thought of as requiring psychiatric help.

Heredity.

While, as stated under " Method ", an attempt was made to gather information on this subject as carefully as possible from all the sources immediately available at the time the patient was studied in the Clinics, the usual difficulties (hearsay evidence, bias and inaccuracies in reporting, etc.) were experienced in securing really objective and reliable data as to the incidence and nature of nervous or mental disease in the antecedents and siblings of our patients. This, in combination with the limited number of patients studied, renders the figures in columns 8 and 9 of Table III of suggestive

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TABLE III.—*Relative Incidence of Hereditary Taints in the Different Diagnostic Groups.*

Diagnostic Group	Number of Patients	Number of Cases with: Normal Heredity	Parent Psychotic	Parent Neurotic	Sibling Psychotic	Sibling Neurotic	Corollary Heredity	Total Incidence	Per cent Normal Heredity
Adult Maladjustment	4	2		2				2	50%
Anxiety State	9	6		2		2		4	66%
Conversion Neurosis	15	7	1	6		3		9	47%
Manic-Depressive Psychosis	9	5		5		3		8	55%
Mixed Psychoneurosis	6	2		2		2		4	33%
Obsessive-Compulsive Neuroses	2	1				1		1	50%
Paranoia	1			1				1	
Psychosis with Drug Intoxication	2	1		1				1	50%
Psychosis with CNS Pathology	17	12		2		1	4	7	71%
Psychosis with Organic Disease	1		1					1	
Psychopathic Personality	16	3	2	7	1	6	2	18	19%
Schizophrenia	32	9	9	8	7	9	8	41	28%
MEANS OR TOTALS	114	48	13	36	8	27	14	100	42%
Column Number	1	2	3	4	5	6	7	8	9

rather than determinative value; nevertheless, the data indicate that definite differences among the various diagnostic groups do exist. Thus, in our series of 32 schizophrenic patients, a comparatively high incidence of hereditary taint was revealed, as may be seen in the following supplementary tabulation:

Both parents psychotic	2	cases.
One parent psychotic, one neurotic (neurosis in this connection including alcoholism, epilepsy, migraine, etc.)	5	,,
Both parents neurotic	8	,,
Siblings psychotic	7	,,
Siblings neurotic	9	,,
Collateral heredity, psychotic or neurotic	8	,,
Normal family history in so far as determinable	9	,,

In this series, moreover, interesting combinations in the familial distribution of mental disease with regard to the sibship occurred. For instance, 3 of the patients with psychotic siblings also had one or both parents psychotic, but on the other hand, in the case of a 27-year-old female patient with paranoid schizophrenia, in whom there was a definite history of melancholia and suicide in the father and schizophrenia in the mother, the family history and a direct examination revealed no character abnormalities in either of the patient's two siblings—one of whom, interestingly, was the patient's identical twin. On the whole, it may be of significance to compare the incidence of completely normal direct heredity in the schizophrenic series—only 27%—with the corresponding control figure of 71% in the series of patients with organic disease of the central nervous system. Unfortunately, since our other diagnostic groups are smaller, similar comparisons among them (Table III, columns 7 and 8) are less valid.

Early Behaviour Abnormalities.

These were coded in the analytic tables when the behaviour disorders had apparently exceeded the bounds of "normal", and when a fairly accurate history could be obtained as to their nature and time of occurrence in the patient's childhood. Although definite conclusions could not be derived from information subject to so many errors of recall and interpretation, nevertheless the data listed in Table IV suggest the following possibly significant inferences:

In the group of psychopathic personalities, specific inquiry revealed early abnormalities of behaviour (particularly lying, temper tantrums, "mischievousness" and truancy) in 12 of the 16 patients, indicating that the tendency of these individuals to act out their emotional conflicts began to find overt expression even in early childhood. A somewhat lower percentage (21 of 32 cases) occurred in the schizophrenic group, in whom the specific types of conduct disturbance were somewhat different, the incidence being, in diminishing order of frequency, shyness, extreme attachments to one or the other parent,

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TABLE IV.—*Incidence of Early Behaviour Difficulties and Personality Types in the Various Diagnostic Groups.*

Diagnostic Group	Number of Patients	Early Behaviour Disorders	Later Personality Type								
			"Normal"	Aggressive	Cyclothymic	Neurotic	Paranoid	Perfectionistic	Psychopathic	Puerile	Schizoid
Adult Maladjustment	4	3								3	
Anxiety State	9	5	2		1			1		4	1
Conversion Neurosis	15	8	5	1					1	8	
Manic-Depressive Psychosis	9	3	4		4						1
Mixed Psychoneurosis	6	4			1	1				3	
Obsessive-Compulsive Neuroses	2								1	1	
Paranoia	1						1				
Psychosis with Drug Intoxication	2	1	1	1							
Psychosis with CNS Pathology	17	3	11		3				1	2	
Psychosis with Organic Disease	1	1								1	
Psychopathic Personality	16	12		1	2				6	4	3
Schizophrenia	32	21	4		4	2	3		4	1	14
Means or Totals	114	61	28	3	15	3	4	1	13	27	19
Column No.	1	2	3	4	5	6	7	8	9	10	11

phobias, night-terrors and enuresis. In the group of 32 neurotic patients, a definite history of abnormalities in early conduct or thinking was obtained in a still smaller proportion of cases (17 of 32 patients), and here the types of behaviour abnormalities were more variable. As a control of the above observations, it is interesting to note that in the group of 17 patients with organic disease of the central nervous system, only 3 were recorded as having had significant disturbances of behaviour in childhood, although every attempt was made to obtain as detailed a history in these cases as in the neuroses and functional psychoses.

"Pre-Psychotic Personality."

In spite of the fact that nearly all of the usual one-word descriptions of "personality" (e.g., syntonic, cyclothymic, psychopathic, infantile, etc.) were coded for use in this category, it was found impossible in the great majority of cases to apply with any degree of accuracy any simple designation to any one patient, even if the connotations of the term employed were made as broad as could reasonably be justified. However, there emerged in our studies on this subject a "personality type" which, if a one-word description were necessary, could perhaps best be designated as "puerile"; i.e., a passive, dependent individual who seemed never to have emancipated himself from the emotional relationships of late childhood, and who had gone through life either overtly shying away from adult social, familial and occupational responsibilities, or else reacting to them with an individually characteristic repertoire of conversion symptoms, vague obsessions and compulsions, and other types of inadequate emotional compromises. In their sexual and marital relationships, the women in the group were usually demanding, insecure, dependent, and genitally frigid; correspondingly, the men were impotent and jealous, yet promiscuous in varying degree. Theoretically, the individuals in this group could not be designated as "infantile", inasmuch as they had partially outgrown the need for complete dependence; similarly, they could not be described either as "psychopathic" or as "neurotic characters" in the sense of Alexander, since their reactions were both allo- and autoplastic, i.e., at various times they not only acted out their conflicts, but also condensed and symbolized them in varying symptom formations. Nor, finally, could the quasi-organic and fatalistically-coloured term "constitutional inferiority" be applied to them, since this would overstress the hereditary and congenital factors and neglect the often important influence of traumatic emotional experiences in the early life of many of these individuals. This group of "puerile personalities" comprised 23 of our 114 patients (Table IV, column 10), and contributed the most frequent "personality type" to the various subgroups of the neuroses.

In the group of schizophrenic cases particular attention was paid to the designation of pre-psychotic personality, in view of the fact that Bleuler's

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and Kretschmer's tenets on the subject still seem to be given wide credence. It is of interest to note, therefore, that in only 14, or 43%, of the cases could the pre-psychotic personality of our schizophrenic patients validly be described as " schizoid ", whereas 4 of these patients had been almost classical " cyclothymics " before their illness, and in 4 others careful search revealed no indications of abnormal pre-psychotic personality traits whatsoever. Similarly, in the manic-depressive group, only 4 patients could be said to have had preceding swings of mood and activity of significant constancy or duration, whereas in an equal number the history revealed no definite abnormalities of personality before the onset of the psychosis. In our study, therefore, as in the recent reports of other investigators (*cf.* Appendix), there were no data that indicated that the pre-psychotic personality corresponded in any exact way with the type of psychosis that later developed in the individual.

Symptomatology.

Disturbances of Organ Function.

These were distributed among the various diagnostic groups as follows (Table V) :

Anxiety States.

The so-called " somatic accompaniments " of anxiety appeared as a complete syndrome (i.e., attacks of tachycardia, palpitation, dyspnœa, globus, flushing, vertigo, faintness or syncope accompanying an intense but unfixed affect of apprehensiveness) in only one of our patients, but fragments of the syndrome in various combinations appeared in 7 of the 9 patients in this group. In only 2 patients, therefore, was the affect of anxiety not accompanied by definite visceral disturbances.

Conversion Hysteria.

Our analysis of the symptomatology of the 15 female patients in this group revealed one interesting fact, namely, that the conversion symptomatology in every case had, at one time or another, involved two or more organ systems. In many cases, indeed, careful non-suggestive inquiry was successful in eliciting a history of neurotic dysfunction in almost every organ in the body, e.g., a patient whose only complaint on entry was difficulty in swallowing would, if asked for further details about other symptoms, generally remember that at various times she had also suffered from palpitations, disturbances in breathing, globus (a symptom that had occurred at some time in 40% of our hysterias), muscular weaknesses, peripheral dysæsthesias, menstrual disturbances and various urinary or gastro-intestinal dysfunctions. True, these symptoms and their varying combinations might have abated and become of secondary import at the time of admission, yet at some previous period of her illness they had

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TABLE V.—*Differential Symptomatology in the Various Diagnostic Groups.*

Diagnostic Group	No. of Patients	Disturbances in Somatic Functions								Speech Disturbances	Disturbances of Mental Function								
		Incidence of Disturbance in Various Organ Systems					Disturbances in Sensation				Disturbances in Emotional Tone				Sensorial Aberrations				
		Cardio-Respiratory	Gastro-Intestinal	Genito-Urinary	Muscular	Vascular	General[1]	Skin	Special Sense		Anxiety	Depression	Suicidal Tendencies	Other[2]	Delusions	Phobias	Illusions and Hallucinations	Obsessions	Compulsions
Adult Maladjustments	4	3	1		2		3		1	1	2	1		4		1		2	1
Anxiety State	9	4	5	1[3]	4	2					9	5	3	7	1	6	1	2	1
Conversion Neurosis	15	8	9	3	10	2	7	4	2		4	6		4		2	2	4	2
Manic-Depressive Psychoses	9		2		1		1			2	2	6	2	8	3	1		2	
Mixed Psychoneuroses	6	3		2		3	3		1		2	1	2	6		1		2	1
Obsessive-Compulsive States	2	1	1	1	2	1	1	1		1	2	1		2	2	2		2	2
Paranoia	1										1	1			1	1		1	
Psychosis with Drug Intoxication	2			1	2		1				2	2		1	1		2	1	
Psychosis with CNS Pathology	17	3	2		9	3	7	4	5	9		3	1	5	9		4	3	1
Psychosis with Organic Disease	1			1	1						1	1		1	1		1	1	1
Psychopathic Personality	16	2	2	2	4	3	3	4	3	3	5	5[4]	1	6	7	4	1	5	3
Schizophrenia	32	4	5	8			8	5	1	19	6	11[5]	11	13	26	8	20	18	20
TOTALS	114	28	26[6]	19	35	14	34	18	13	35	36	43	20	57	51	26	31	43	32
Column Number	1	2	2	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

FOOTNOTES: [1] Headaches; vertigo; generalized, unclassifiable paresthesias, etc.
[2] Elation, feelings of depersonalization, etc.
[3] Functional amenorrhea.
[4] Two cases of panic reaction.
[5] Three cases of panic reaction.
[6] Nine cases of globus hystericus.

been of prime concern to her, despite the fact that physical examinations had then, as now, revealed no organic pathology.

" Hysterical Stigmata."

In view of certain older diagnostic concepts, it is interesting to note that in none of the cases of conversion hysteria was the pharyngeal reflex absent, while the only instance of " tubular vision " occurred, not in an hysteric *per se*, but in a 36-year-old male who suffered primarily from post-encephalitic narcolepsy. Similarly, only 2 cases in the series offered a presenting complaint or a past history of any disturbances of special sense: one patient complained of tinnitus, and another included photophobia and ocular pains in her variegated semeiology. The only case in this series with a definitely unilateral sympathetic disturbance was a 27-year-old girl, who invariably developed a marked urticaria on the left side of her neck whenever she became emotionally disturbed; although there were undoubted neurotic factors in this patient, this symptom, along with many of her other complaints, disappeared after a thyroidectomy performed elsewhere. Included in the group of conversion hysterias were 2 patients with " anorexia nervosa ", both of whom were in a state of profound cachexia at the time of their admission. Both of these patients made a remarkable physical recovery under psychotherapy, bolstered up by a planned hospital regime, but only one of them continued well after her discharge from the hospital.

Conversion Symptomatology in " Neurotic Characters " and in " Psychopathic Personalities ".

As may be seen in Table V, these patients had comparatively few complaints of neurotic organ dysfunctions. However, this fact is of little heuristic significance, inasmuch as the tendency of these patients to " act out " their inner conflicts rather than convert them into organ dysfunctions led to their classification as " neurotic characters " or—if asocial or antisocial trends were present—to the use of the diagnostic *cliché* " psychopathic personality ". Moreover, it is important to note that disturbances of mental function (even fixed delusions—*cf.* Table V, columns 11 to 19) were comparatively frequent in these cases, so that here, as elsewhere, absolute diagnostic criteria were difficult to set up.

Conversion Symptoms in Schizophrenia.

Frank conversion symptomatology in the schizophrenic patients at the time of their admission (Table V, columns 1 to 10) was noted comparatively rarely, but in this connection two considerations are of importance, viz., (*a*) in no less than 15 of the 32 patients there was a definite history of hysterical symptoms which preceded the development of the more frankly schizophrenic

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syndrome, and (*b*) the disturbances of thinking, affect and behaviour present in these patients (Table V, columns 11 to 19) may well have obscured persistent hysterical symptoms at the time of the examination. Insomnia occurred in our cases of early schizophrenia with sufficient frequency (9 of 32 cases) to deserve comment, especially in view of the importance usually attached to this symptom in the early differential diagnosis of depression; however, it is of interest that this symptom seemed to have a rather favourable prognostic import, inasmuch as 7 of the 9 schizophrenic patients in whom insomnia was a definite prodromal symptom attained complete or nearly complete remissions within a year after their discharge from the hospital.

Other factors.—A general survey of the incidence and type of conversion symptomatology in the entire group of 114 patients showed no significant correlations with sex, age or marital status.

The Mental Status.

Analysis of "Emotional Tone".

The patients in the various diagnostic sub-groups presented so great a variety of affects in their various combinations and nuances that predominant emotional tones could be said to exist only in the manic or depressive groups and in patients with overwhelming anxiety. Nevertheless, if more or less easily recognized emotional states are singled out, certain interesting data appear. For instance, it may be seen (Table V, column 12) that depression with or without agitation or retardation was the most frequent reaction complained of or observed (43 of 114 cases), and was particularly common in patients diagnosed as having early schizophrenic syndromes; in these patients, moreover, suicidal preoccupations and actual attempts at self-destruction had the greatest incidence of all the groups. Anxiety—possibly signalling unsolved and pressing intrapsychic conflicts—was the next most frequent affect (34 cases), having a high incidence in all groups except that of the psychoses with lesions of the central nervous system. Of the other less clearly demarkable affective states, "panic" was most frequent in the schizophrenic group (5 cases), whereas the greatest variability of emotional tone occurred with the confusional states that accompanied organic disease.

Sensorial Aberrations.

No "delusions" were recorded as such in the patients diagnosed as conversion hysterias or mixed psychoneuroses, but even in these patients sensorial aberrations, such as fixed hypochondriacal preoccupations, seemed, on occasion, to have a delusional substrate. Similarly, in the obsessive-compulsive neuroses the dividing line between obsession and delusion sometimes became so tenuous that absolute distinctions were impossible. In all other groups

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except the small one of "adult maladjustments", frank delusions were recorded in a variable percentage of cases, many of the patients with anxiety states and those diagnosed "psychopathic personality" giving a history of distortions of reality or ideas of influence that had occurred some time during their illness or had persisted to the time of the examination. In the latter diagnostic group the delusional preoccupations were mainly persecutory or grandiose, and exemplified the conflicts of these individuals with the social *mores*.

Phobias.

In the anxiety states these were mostly (5 of 15 cases) concerned with fears of specific diseases or death, but in no case was the retributive significance of these fears recognized by the patient. In the schizophrenics the phobias were more frankly symbolic, e.g., fear of dying from hæmorrhage at childbirth, fears of "being raped by my father", frank fear of homosexuality, etc.

Obsessions and Compulsions.

These also occurred with the greatest frequency in the schizophrenics, in whom, moreover, they were the most frankly expressive of covert wishes. For instance, one patient felt impelled to pull the ears of every male she saw; another experiences almost irresistible impulses to kill her husband; a third, prior to her admission, had persisted in secreting herself in a house in which her mother had been burned to death; a fourth insisted on walking nude in the rain, and so on. Of even greater interest, however, is the finding (Table V, columns 18 and 19) that obsessions and compulsions of an intensity and nature beyond that which might be considered normal appeared not only in the so-called obsessive-compulsive neuroses, but also in every other diagnostic group, illustrating once again the universality of these phenomena in mental dysfunctions and their corresponding lack of specific nosological significance.

Illusions and Hallucinations.

Among the psychoses with organic disease of the central nervous system, variable visual or auditory hallucinations were noted in cases of senile psychosis, cerebral arteriosclerosis, Alzheimer's disease and in the Korsakov syndrome. In the schizophrenic group these disturbances were much more common and, as was true also of phobias and obsessive-compulsive phenomena, were indirectly expressive of unconscious inner conflicts. Thus, a repressed male homosexual became violent after an hallucinatory accusation of homosexuality, an aggressive, destructive, soiling patient "heard God preaching to be clean", and a deeply inhibited middle-aged virgin saw and felt "cracksmen" who "rimmed" her. However, as in the case of other sensorial aberrations the import of our data seemed to be that even "hallucinations" and "delusions" were relative terms, that at times they could be distinguished only with difficulty from

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kindred manifestations, such as unreality feelings and hypnagogic phenomena, and that none of these manifestations was limited to any one or two nosological sub-groups (Table V, column 14).

Ætiology.

Organic Ætiological Factors.

Intoxications.

In 7 cases distributed as recorded in Table VI, columns 2 to 4, alcoholic intoxication was judged to be an important factor in the clinical picture. Bromide and barbiturate intoxications occurred in 3 cases of conversion hysteria, and in one patient whose psychosis was also influenced by a severe organic disease.

Somatic Disease.

One of the most suggestive findings in this study was that in 11 of the 30 patients with conversion hysteria, the symptoms, while symbolically exaggerated and elaborated, nevertheless were related to some nidus of organic pathology (such as mild hypo- or hyperthyroidism, subacute arthritis, pelvic inflammatory disease, electro-encephalographically diagnosed subliminal epilepsy, etc.), the presence of which could be established by a careful medical investigation. Similarly, a definite organic substrate was also found for the early somatic complaints of 11 of our 32 schizophrenic patients, although in these, contrary to expectations, it was more difficult to trace the form of the symptom to the actual organic finding. Determinable disease of the central nervous system was, of course, a rare finding (4 of 93 cases) in patients diagnosed as having functional nervous disturbances, mainly because definite evidence of important pathological changes in the central nervous system generally placed a patient in the organic group (Table V, column 6). For a similar reason the ætiological significance of brain injuries in schizophrenic patients (so frequently stressed by their relatives) could not be confirmed by careful neurological examinations, whereas, in the one case in which there seemed to be a possible connection between a brain trauma and the onset of the patient's schizophrenic syndrome, an encephalographic examination was negative. Nevertheless, in one patient classified as psychosis with drug intoxication, a marked change in personality and persistent alcoholism had certainly followed a depressed skull fracture with injury to the left parietal lobe.

Psychological Factors.

Maladjustments and Conflicts.

This type of ætiology was, of course, the most difficult to evaluate, inasmuch as the relative importance attached to the psychological reactions to various types of maladjustments (sexual, familial, marital, occupational, social or

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religious) in our patients depended not only upon the sources and completeness of the history and the thoroughness of the psychiatric examination of the individual patient, but also upon the training and personal bias of the psychiatrist who had obtained and interpreted the data. Another difficulty arose from the inherent inter-relationships of the various sources of intrapsychic conflict, inasmuch as familial, marital and sexual maladjustments were hard to isolate, and all of these were frequently intertwined with economic and social maladaptations to an almost inextricable degree. Moreover, if a psychoanalytic viewpoint were taken, an infantile sexual-familial basis for all later internal conflicts and external maladjustments could be postulated, thus relegating contingent environmental circumstances to a secondary, over-determinative or, at best, a precipitating role. These reservations must be kept in mind, then, in the following analysis of the various factors that were thought to be of importance in the psychogenesis of the neurotic and psychotic reactions of our patients.

(1) First of all, it is of interest to note that in only 3 cases in our entire series were the neurotic or psychotic mental reactions of the patient judged to be attributable to a maladjustment limited to any single sphere (Table VI, columns 7 to 13). On the other hand, in over 60% of cases three or more sources of emotional stress were thought to be of sufficient importance in the psychopathology of the case to merit separate notation, whereas in over 90% of the cases two or more apparently separate spheres of maladaptation were listed.

(2) As to the general nature of the conflicts in the various diagnostic subgroups, sexual maladjustments (excessive inhibition, incestuous tendencies, unaccepted homosexuality, frigidity, impotence, etc.) were most frank and frequent in the schizophrenic patients, and as frequent, but less frank, in the conversion hysterics. In contrast, the patients diagnosed as "psychopathic personality" generally made better external sexual adjustments, but were proportionately much more prone to have difficulties in their early social and occupational adaptations (Table VI, columns 9 and 11). It is of interest also (Table VI, column 10) that 82% of the married patients in all the groups of neuroses and psychoses were thought to have connubial incompatibilities that contributed materially to their psychoneurotic reactions.

(3) Finally, it may be noted as a control observation that of the 17 patients with organic psychoses, only 4 patients were thought to have important psychoneurotic reactions traceable in any way to maladjustments in any of the categories mentioned. Since these patients were investigated as carefully from a psychiatric standpoint as those in the other diagnostic groups before any diagnosis was assigned to them, this finding serves in some measure as a check on the possibility that unwarranted interpretations had been made with regard to the sources and nature of mental reactions in the patients diagnosed as having "functional" neurotic or psychotic disorders as analysed in Table VI.

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TABLE VI.—*Ætiological Factors in the Various Diagnostic Groups.*

Diagnostic Group	Number of Patients	Somatic Factors						Environmental Maladjustments and Intrapsychic Conflicts					
		Intoxication with Drugs											
		Alcohol	Bromide	Barbi-turate	Somatic Disease	Pathology of the CNS	Sexual	Familial	Social	Marital	Occupational	Economic	Religious
Adult Maladjustment	4	1			1[1]		1		2	2	3	2	
Anxiety State	9				2[2]	1[3]	5	5	2	3	1[4]	3	
Conversion Neurosis	15		2	1	7[5]		13	7	4	7		2	
Manic-Depressive Psychosis	9				1		8	4	1	2	2	2	1
Mixed Psychoneurosis	6				4		5	5	1	2	2		
Obsessive-Compulsive Neuroses	2						2	1		1			
Paranoia	1	1					1		1	1			
Psychosis with Drug Intoxication	2	2			1[6]	2[7]	1				1	1	
Psychosis with CNS Pathology	17	1			6	17	2			3		2	
Psychosis with Organic Disease	1		1		1[8]		1	1					
Psychopathic Personality	16	3			4		8[9]	11	11	3	7	1	
Schizophrenia	32				11	1[10]	22	12	8	6	5	4	5
TOTALS	114	8	3	1	38	21	69	46	30	30	21	17	6
Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13

Footnotes:
[1] Tuberculosis
[2] Chronic dermatitis; Raynaud's Disease.
[3] Dural fibroma.
[4] Main source of maladjustment in one case.
[5] Type of conversion symptom partly determined by mild somatic disease in five cases.
[6] Lichen planus.
[7] Brain trauma; Peripheral neuritis.
[8] Polyglandular dyscrasia?
[9] Five cases of more or less overt homosexuality.
[10] Acute phase of illness dated from head trauma; encephalogram normal.

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Results of Intra-mural Treatment.

No attempt was made in this study to evaluate the separate effects of various forms of therapy, inasmuch as every patient admitted to the ward was subjected to the usually favourable influences of adequate rest, nutritious food and a quiet, peaceful ward routine ; also, there seemed to be no justification for depriving the patient of any type of treatment that gave promise of being beneficial. Therefore, while an attempt was made in each instance to foster emotional insight to an effective yet not too disturbing degree, every patient was also given various forms of superficial psychotherapy, such as suggestion, reassurance, persuasion and, in some cases, hypnosis or prolonged narcosis. Further, no physiological or pharmacological measures were neglected ; the patients received adequate sedation, occupational therapy, all forms of physio-therapy and, when indicated, medical (including endocrine) or surgical treatments directed by various members of the consulting staff. In the analysis of our results therefore, it was deemed impossible to isolate individual influences out of this eclecticism of therapy, so that the therapeutic effects obtained were regarded only as total phenomena. Moreover, in every instance these results had to be graded not only according to an absolute scale, but also with regard to the patient's previous personality, the nature and severity of his illness, his assets and capabilities and other individual factors. In view of these considerations, a broad system of grading the general effects of treatment was adopted, and the data were scaled and organized as shown in Table VII, columns 1 to 10. Examination of this table reveals the following :

(1) The results of the relatively brief period of intra-mural treatment (averaging about a month) in the various neuroses are relatively favourable, i.e., if grade 2 or better of the table is taken as a criterion, 65% of the patients with an anxiety state or a mixed psychoneurosis showed definite clinical improvement, whereas 73% of the conversion hysterics attained a comparable degree of recovery. However, neither of the two patients whose neuroses were predominantly obsessive-compulsive in nature showed any stable amelioration in their symptomatology.

(2) In the psychopathic personalities, recovery from incidental conversion symptomatology was obtained as easily as in the conversion hysterics, but the deficiency of insight in these patients and the instability of their general behaviour brought the incidence of general improvement down to about 44%.

(3) In the manic-depressive psychoses, treatment during the average stay of one month produced "grade 3 recovery" in 55% of the cases, but this figure is largely invalidated by the smallness of the series and by the probably high incidence of spontaneous recoveries in the relatively mild cases admitted.

(4) Of more significance is the fact that, despite the ominous import of the diagnosis, 28% of patients diagnosed as "schizophrenic" showed signs of a definite remission at the end of their average stay of 27 days in the Clinics ;

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moreover, over half of those who showed this symptomatic recovery developed a more or less stable insight into their illness. As will be shown, this rate of recovery was later augmented by the further improvement of schizophrenic patients under extra-mural therapy.

(5) The relative conservatism of the estimated percentages of clinical improvement in the various diagnostic groups is evidenced by the fact (Table VII, column 4) that only 10 of the 114 patients were considered to have improved to an extent sufficient to be placed in group " four plus ", whereas only one patient in the entire series was thought to have shown a completely satisfactory degree of recovery (grade 5, Table VII, column 5).

(6) A survey of the relationships of other variables to the degree of intra-mural recovery revealed no determinative sexual, marital, educational or religious factors, but disclosed—

(*a*) That the most favourable recoveries during hospital therapy occurred in persons below 35 years of age.

(*b*) That the optimum period of stay in the hospital ranged from two to three weeks.

(*c*) That amytal hypnosis often (17 of 36 cases) seemed to expedite the establishment of *rapport* with the therapist and thus to facilitate the therapy.

(*d*) That the patients designated by previous investigation as having " puerile personalities " made initially rapid, but often unstable and essentially unsatisfactory recoveries.

(*e*) That conversion symptomatology involving the gastro-intestinal tract responded with comparative readiness to therapy, but that other types of symptoms, especially those involving the cardio-respiratory-vascular system, were frequently more difficult to treat.

(*f*) And finally, that fixed obsessions and compulsions (and, of course, delusions and hallucinations in the psychoses) were of definitely unfavourable import with regard to the results to be expected from the short course of hospital treatment.

Prognosis.

The factors that determined the prognosis in any patient were, when analysed, perhaps more complex than those that underlay any other single evaluation of the case. To specify, so far as possible, the prognosis assigned to an individual seemed to be influenced by at least eight interrelated considerations: (*a*) An evaluation of the patient's constitutional make-up, both physical and mental; (*b*) the nature and intensity of previous neurotic or psychotic reactions; (*c*) the results of various forms of therapy previously attempted; (*d*) the duration, type and severity of the presenting illness, including the presence of organic disease; (*e*) the depth and plasticity of the

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TABLE VII.—*Degree of Intra-mural Recovery and Prognosis at Discharge Compared with Status at One Year after Hospitalization.*

Diagnostic Group	No. of Pts.	(A) Degree of Intramural Recovery.							%		(B) Prognosis at Discharge.								%		Degree of Recovery at One Year % (Cf Table 10)	
		-	o	1	2	3	4	5	2+	3+	I	-	o	1	2	3	4	5	2+	3+	2+	3+
Adult Maladjustment	4				2	1	1		100%	50%				2	2				50%	0	67%	67%
Anxiety State	9		1	2		6			66%	66%			1	2		6			66%	66%	71%	57%
Conversion Neurosis	15		2	2	3	6	1	1	73%	53%			2	1	5	6	1		75%	47%	57%	50%
Manic Depressive Psychosis	9	1	2	1	3	1	1		55%	22%	1	2	1		3	2			55%	22%	62%	62%
Mixed Psychoneuroses	6		1	1	2		2		66%	33%				1	3	2			83%	33%	83%	67%
Obsessive-Compulsive Neuroses	2		2						0	0	1	1							0	0	0	0
Paranoia	1				1				-	-					1				-	-	-	-
Psychosis with Drug Intoxication	2				1	1			-	50%					1	1			-	50%	50%	-
Psychosis with CNS Disease	17		8	3	2	4			35%	24%	7	10			5	1	1		41%	12%	47%	27%
Psychosis with Organic Disease	1				1				-	-		1							-	-	-	-
Psychopathic Personality	16		7	2	4	2	1		44%	19%	2	2	1	3	8	2			62%	16%	54%	31%
Schizophrenia	32	4	13	2	6	3	4		41%	22%	15	8	6	5	7	5	1		40%	19%	46%	25%
TOTALS	114	5	36	13	25	24	10	1	53%	31%	26	24	11	14	35	25	3		64%	25%	46%	25%
Column Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

CODE:

(A) Scale of Recovery at Time of Discharge from Hospital.

- \- (Col.2) (-1 to -5) Corresponding degree of exacerbation of somatic or mental symptoms.
- o (" 3) No change in symptomatology or mental status.
- 1 (" 4) Slight improvement in either somatic or mental symptoms but rapport superficial, and insight slight or absent.
- 2 (" 5) More marked improvement in either mental or somatic symptoms, but gain variable and unstable, and insight still unsatisfactory.
- 3 (" 6) Definite and fairly stable clinical improvement, with increased rapport and fair cooperation, but only moderate insight.
- 4 (" 7) Clinical recovery from primary complaints with the persistence of only a few minor symptoms; good cooperation, based on fairly adequate insight, in plans for environmental readjustments.
- 5 (" 8) Apparently complete and stable symptomatic recovery, with excellent cooperation based on good emotional insight, in plans for extra-mural readjustments.

N.B. The scale of values could not be applied rigidly because of the lack of exact correspondence in individual cases among the different criteria considered: symptomatic relief, improvement in mental status, degree of rapport and cooperation, and attainment of insight. In many patients, therefor, the degree of general improvement had to be estimated in a conservative but essentially empiric manner.

(B) Prognosis at Discharge.

- I (Col.11) Institutionalization though necessary, and recommended.
- \- (" 12) (-1 to -5). Expected to get worse in corresponding degree.
- o (" 13) Expected to remain about in status quo.
- 1 (" 14) In the neuroses, only slight unstable recovery from symptoms expected. In the psychoses, sufficient recovery to permit the patient to remain outside an institution, but only if given constant nursing or other supervision.
- 2 (" 15) Special care unnecessary, but occupational, social, marital and other adjustments likely to be precarious under any but favorable circumstances.
- 3 (" 16) Fairly satisfactory symptomatic relief and moderate environmental readjustments prognosticated, but recurrences of difficulties expected under new stresses.
- 4 (" 17) Clinical relief from symptoms for an indefinite period; previous social, marital and other personal maladjustments definitely improved, but nevertheless likely to recur to some degree under special stress.
- 5 (" 18) Complete, stable recovery likely to be maintained even under unfavorable circumstances.

emotional conflicts and the maladjustments to reality involved ; (*f*) the degree of *rapport* and co-operation that could be obtained, as related to (*g*) the amount of insight that could be cultivated under superficial psychotherapy ; and, finally, (*h*) the availability of an extra-mural milieu devoid of occupational, familial, social, economic or sexual stresses beyond the patient's capacity to withstand. As in the evaluation of the results of intra-mural treatment, it therefore proved difficult to isolate the specific influence of these vectors in the determination of any single prognosis, so that once again a holistic standpoint had to be taken. The inferences to be drawn from an analysis of the prognoses thus made in our patients (*cf.* Table VII, columns 11 to 20) may briefly be stated as follows:

(1) Even in the cases in which the prognostic factors enumerated were relatively favourable, there was a distinct tendency, in forecasting the fate of a neurotic patient, to make the prognosis adverse to a degree subsequently shown to be unjustified by the course of the patient under adequate therapy. In other words, the actual degree of recovery in the majority of the neurotic patients, with the exception of the obsessive-compulsive types, exceeded by a considerable margin the prognostications made at the time of their discharge from the hospital.

(2) Peculiarly, however, a tendency in the opposite direction was discernible in the prognoses in the group of psychopathic personalities and schizophrenics who, despite the adverse connotations of these diagnoses, were nevertheless judged to have moderately favourable prognoses in 41% and prospects of fairly stable clinical recovery in 19% of the cases (Table VII, columns 2, 3 and 4). That these relatively favourable prognoses were, on the whole, quite justified despite their disparity with the diagnoses assigned to the same patients, will be seen in the discussion of the actual recovery-rates in the groups mentioned. However, the point may be re-emphasized that prognosis apparently depended less upon the " diagnosis " assigned to a " case " than upon a broad evaluation of the various constitutional, psychological and environmental factors operative in the individual patient.

Methods of Therapy.

In addition to the various forms of psychotherapy already outlined, the following were employed when indicated :

Organic.—This consisted of surgical treatment for concurrent organic dysfunctions, such as operation for hyperthyroidism (3 cases) and hypospadias (1 case). Medical therapy for various conditions was employed as listed in Table VI.

Environmental readjustments.—In general these took the following forms (Table VIII) :

Social : Adoption of athletic pursuits or other interests, and enrolment in educational or organization activities.

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Familial: Readjustment of intra-familial relationships, such as moving away from a conflictful family environment, provision for separate maintenance of in-laws or other persons who had been a disrupting influence in the home, the provision of foster care for problem children, etc.

Sexual: Referral for contraceptive advice or recommendation of books and pamphlets on the technique of marital relationships.

Occupational: Relief from, or assumption of, greater responsibilities at work; change to a more suitable occupation, rearrangement of working hours, etc.

General: In 10 of our 114 cases vacation away from a previously traumatic environment and current responsibilities was arranged as a preliminary to more permanent readjustments; in 7 of these 10 cases in which the recommendation was carried out, the results were judged to be favourable. In 27 cases of the entire series further hospitalization was advised. Table VIII shows the frequency with which other environmental changes were thought to be necessary in the various diagnostic groups.

Psycho-analytic therapy.—It is perhaps of interest that in only 4 cases of the entire series was psycho-analysis recommended when the patient was discharged from the hospital. Of course this does not mean that a much larger proportion of patients might not have benefited from this form of therapy to an extent perhaps impossible to achieve by other methods; nevertheless, it is significant that in only 4 cases was psycho-analysis thought to be both indicated and at the same time compatible with the patient's age, intelligence, his social, religious, occupational and financial status, or the presence of difficult technical problems presented by borderline psychotic features in his illness. The results of the psycho-analytic procedure in the cases in whom analysis was begun are not as yet available for inclusion in this report.

Follow-up Studies.

Out-Patient and Social Service Follow-up.

Columns 10 and 11 of Table VIII list the number of patients in each diagnostic group who were advised to continue treatment in our out-patient clinic, with or without a referral for additional help by a social worker; the following columns list the patients who actually availed themselves of these opportunities. As may have been anticipated, neurotic patients were most prone to continue treatment and "psychopathic personalities" least; however, there was a surprisingly large number of schizophrenics with whom a fairly continuous therapeutic *rapport* could be established.

Co-operation of Patients and Their Families.

Columns 14 to 27 of Table VIII list the extent of co-operation in the extramural treatment displayed by our patients and their families; perhaps the

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TABLE VIII.—*Degree of Co-operation of Patients and Their Families with the Recommendations for Extra-mural Care.*

Diagnostic Group	No. of Patients	Environmental Readjustments Recommended								Social Service Follow-up		Out-Patient Dept.		Degree of Cooperation: Of Patient							Degree of Cooperation: Of Family						
		Social	Familial	Occupational	Marital	Sexual	Vacation	Institutionalized	Psychoanalysis Recommended	With Psychiatrist	Alone	Recommended	No. of Patients Followed up.	-	o	1	2	3	4	5	-	o	1	2	3	4	5
Adult Maladjustment	4	3	2	2	1	1	1			3		3	3			1	1	1				2	1				
Anxiety State	9	6	3	2	1	2	2		1	2	1	9	7		2	3		2		1		3	2		1		
Conversion Neurosis	15	8	4	3		4	2			5	1	11	6		3	1	1	5	3			1	5	4	1	1	
Manic-Depressive Psychosis	9	2	2	1		1	1	2			1	4	1		4	1	1	1	1			5			1	2	
Mixed Psychoneurosis	6	3	2	1	1	1	2		1		1	4	2		1	1	1	3				3	1		2		
Obsessive-Compulsive	2							1	1							1	1									2	
Paranoia	1	1			1	1	1												1							1	
Psychosis with Drug Intoxication	2	1		1	2											1			1				1		1		
Psychosis with CNS Disease	17	2	1	5	3		1	7				5	3				2	1	7	1				1	2	5	1
Psychosis with Organic Disease	1	1		1								1				1								2			
Psychopathic Personality	16	8	6	6	1	2		2	2	4	2	9	2	1	4	2	2	1	1	1	1	3	3	4		1	
Schizophrenia	32	9	9	5	4	1		15		2		9	6	4	13	3	2	5	1			6	4	7	9	2	
TOTALS	114	44	29	27	14	13	10	27	5	16	6	55	30	5	27	15	11	19	15	3	1	23	17	18	17	14	1
Column Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27

Codes:

- (Col. 14 and 21) -1 to -3. Increased resistance to treatment.

o (" 15 " 22) No cooperation.

1 (" 16 " 23) Cooperation in some degree but attitude grudging and working rapport limited.

2 (" 17 " 24) No spontaneous cooperation, but passive, apathetic acceptance of manipulative environmental readjustments by psychiatrist or social worker.

3 (Col. 18 and 25) Acceptance of certain recommendations on basis of moderate rapport with psychiatrist and social worker. Out-patient Clinic attended, but visits tend to be irregular.

4 (" 19 " 26) Cooperation on basis both of positive transference to psychiatrist and fair understanding of past emotional maladjustments.

5 (" 20 " 27) Spontaneous, active cooperation in therapy on basis of stable insight.

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only observation of interest yielded by an analysis of these figures is that fair to good co-operation of both the patient and his family in extra-mural therapy was obtainable in only about half of all the cases and only in about a quarter of the schizophrenics. In this connection the data comprising Table IX—a summary of the reasons that patients gave for not having wholly co-operated in their treatment—proved to be a fascinating study of the type and frequency of the various rationalizations the patients adopted to explain their unconsciously adverse attitudes to therapy. Thus, in 8 of the 11 patients (column 1) who stated that they had improved to a degree sufficient to justify their discontinuation of visits to the Clinics, the symptomatic relief was in fact only partial, the interruption of treatment being manifestly due to the unconscious aversion on the part of the patients towards elicitation of deeper emotional conflicts or further changes in their behaviour pattern. Conversely, a greater number of patients did not reach even this superficial compromise, and either (column 2) continued in the defensive belief that their illness was organic, or else (columns 3 to 12) adopted other formulations for their rejection of the psychotherapy. Similarly, the fact that 7 patients, while admitting emotional elements in their illness, nevertheless objected to the implied necessity of attending a " mental clinic " at all is a reflection on the current lay concepts as to the functions and status of a hospital psychiatric clinic, even when it is known to be "private", to deal ostensibly only with "nervous disorders", and to be an integral part of the division of medicine in a university hospital.

Status of Patients One Year after Discharge.

Table X represents in condensed form an analysis of the status of the 100 patients as determined by an investigation and follow-up interview at about one year after their discharge from the hospital. Columns 2 to 10 are devoted to the degree of change in the somatic symptoms of each case; columns 11 to 17 to the changes in the mental symptoms; columns 18 to 23 to average environmental readjustments in the various diagnostic groups; and columns 24 to 32 to the general level of improvement when all the available data are taken into account. A study of this table reveals a number of facts that merit the following consideration:

(1) *Deaths.*—The 9 deaths that occurred in our series (column 1) are an unusually high mortality in view of the facts that the average age of our patients was only about 28 years; however, only 3 of the deaths occurred in cases that were thought to have no serious organic disease at the time of their discharge. Of the 4 deaths in our schizophrenic patients, 2 occurred within six months of the onset of the mental illness, and could be accounted for only on the basis of profound physical debility with a terminal acute illness of short duration; the other 2 were suicides of patients whose families had rejected our recommendations that the patient be committed.

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TABLE IX.—*Reasons Given by Patients for Their Failure to Co-operate.*

Diagnostic Group	No. of patients who failed to co-operate	REASONS GIVEN												
		1	2	3	4	5	6	7	8	9	10	11	12	13
Adult Maladjustments	1							1	1					
Anxiety State	3	2	1		1	2		1		1		1		
Conversion Neurosis	4	2	4	3	2	1		2	1		1			1
Manic-Depressive	4	2	1	1			1	1						
Mixed Psychoneurosis	1	2	1		1									
Paranoia	1							1					1	
Psychosis with Drug Addiction	1					1				1			1	
Psychosis with CNS Pathology	1	1												
Psychopathic Personality	5		1	2	3	3	3		1	1	1	1		
Schizophrenia	17	2	2	4			2		1	1	1	1		1
TOTALS	38	11	10	10	9	7	6	6	4	4	3	3	2	2

General purport of reasons offered by patients for failures to co-operate wholly in their extramural treatment.

CODE:

1. "Felt well enough" to discontinue treatment and O.P.D. visits.
2. Believed illness organic and selected another physician.
3. Frankly resented psychotherapy.
4. Believed illness psychogenic but that we could not treat it.
5. Disliked stigma of attending a psychiatric clinic.
6. Behaviour uncontrollable at time of illness.
7. Left town.
8. Disliked psychiatrist.
9. Deterred by family from returning for treatment.
10. Adopted cult healing with success - (chiropractic, 1 case; Christian Science, 2 cases.)
11. Disliked social worker assigned.
12. Could not afford return visits.
13. Selected another psychiatrist.

TABLE X.—*Status of 100 Patients One Year after Discharge.*

Diagnostic Group	No. of Patients.	(A) Change in Symptomatology: Somatic D	Somatic 0	Somatic -	Somatic o	Somatic 1	Somatic 2	Somatic 3	Somatic 4	Somatic 5	Mental -	Mental o	Mental 1	Mental 2	Mental 3	Mental 4	Mental 5	(B) Average Readjustments of Non-institutionalised Cases: Familial	Marital	Occupational	Sexual	Social	Cases Institutionalised	(C) General Status: D	I	-	o	1	2	3	4	5	% Clinical Improvement: 2+	3+
Adult Maladjustment	3					1		1	1				1	1	1			1	1.5	2	2	2	1		1			1		2			67%	67%
Anxiety State	7		1[1]	1	1		1	4				1		1	3	2		2	2	2.5	2	1.5				1	1		1	3	1		71%	57%
Conversion Neurosis	14	1[2]	1[3]	1	2		3	3	4		1	4		1	6	1		3	2	3	2.5	2.5	1	1	1	2	1	1	1	4	2	1	57%	50%
Manic Depressive	8				1	1		2	4			2	1	1	2	1	1	3	2.5	2.5	2	2.5	1		1	1		2		3	2		62%	62%
Mixed Psychoneurosis	6		2[4]			2	1	3				.	2	2	2			2.5	2	3	2	3						1	1	2	2		82%	67%
Obsessive Compulsive	2	1[5]	1[3]		2						1	1											1	1	1	1	1						0[9]	0[9]
Paranoia	1								1						1			3	3	4	2	3								1				
Psychosis with Drug Addiction	2		1[6]	1				1			1			1				1	0	-	-	1				1			1				50%	0
Psychosis with CNS Pathology	15	3		3	6	1	1	5	1	1	5	2	1	4	2	1		2	2	1	1.5	1.5	3	3	3	2	2	1	3	3	1		47%	27%
Psychosis with Organic Disease	1		1[7]	1							1												1		1									
Psychopathic Personality	13				3		3	4	3			4		3	4	2		1.5	1	1.5	2.5	1	2		2		4	2	3	3	1		54%	31%
Schizophrenia	28	4[8]		7	3	1	9	4	3	1	6	3	2	6	4	3	1	2	2	2.5	1.5	2	11	4	11	4	5	3	6	5	1	1	46%	25%
TOTALS	100	9	7	14	18	6	18	27	17	2	17	17	7	20	25	10	2						21	9	21	12	14	11	16	26	10	2	54%	38%
Column No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34

Footnotes:
(1) Raynaud's Disease.
(2) Aged 60, but no organic disease determined at time of diagnosis.
(3) Dermatitis.
(4) Thyrotoxicosis, 1 case; nephroptosis, 1 case.
(5) Tuberculosis.
(6) Evidences of previous brain trauma.
(7) Pluri-glandular dyscrasia (?)
(8) Two cases of suicide; 2 acute deaths inadequate autopsy findings.
(9) Combined recovery rate for all types of neuroses: 2+, 59%; 3+, 48%.

Code: (A) Change in Somatic and Mental Symptomatology.
- D (Column 2) Death within one year after discharge.
- O (" 3) Development of organic disease related to symptomatology.
- \- (Columns 4 and 11) (-1 to -5) Symptoms worse in corresponding degree.
- o (" 5 " 12) No change.
- 1 (" 6 " 13) Symptomatic improvement slight or intermittent.
- 2 (" 7 " 14) Greater semeiologic recovery, but extent variable, and tendency to formation of other symptoms evident.
- 3 (" 8 " 15) More stable recovery, with recurrence of symptoms only under stress.
- 4 (" 9 " 16) Clinical relief from all presenting symptoms, with a residue of only a few minor complaints.
- 5 (" 10 " 17) Complete recovery, proved stable under severe environmental and emotional stresses.

(B) Average Environmental Readjustments of Non-institutionalized Patients:
Rating scale under various headings (Columns 18 to 22) ranges from - (diminished adaptability) to 5 (completely satisfactory readjustment.)
(Column 23: Number of patients in each diagnostic group institutionalized.

(C) General Status at about One Year after Discharge.
- D (Column 24) Death.
- I (" 25) Institutionalized.
- \- (" 26) (-1 to -5) Worse in corresponding degree.
- o (" 27) No change.
- 1 (" 28) Only slight and variable improvement in somatic complaints, mental symptoms or environmental difficulties.
- 2 (" 29) Definite improvement in one or more of these spheres, but some complaints still present, and environmental readjustments at a somewhat lower level than previous to thepatient's illness.
- 3 (" 30) Fair recovery from presenting symptoms, with fairly satisfactory resumptio- of occupational, familial and other duties.
- 4 (" 31) Clinical recovery from presenting symptoms, with environmental readjustments at a level higher than that previous to the development of the patient's illness.
- 5 (" 32) Complete and apparently stable semeiologic recovery, with definite improvement in the patient's capacities for pr+sonal and social adaptations.
- 2+ (" 33) Percentage of patients in each diagnostic group who improved to level 2 or better.
- 3+ (" 34) Percentage of patients in each diagnostic group who improved to level 3 or better.

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(2) *Organic disease.*—Seven cases in our series developed definite organic illnesses whose early stages, considered in retrospect, could well have furnished a somatic basis for some of the patient's symptomatology during his stay in the hospital. Nevertheless, at the time of the patient's examination in the Clinics—and in nearly all cases this included a fairly complete diagnostic survey and all indicated examinations by consultants in the specialties—either no organic disease had been found (4 cases), or else the somatic illness had been considered of minor importance in the clinical picture.

(3) *Correlation of physical and mental improvement.*—As will be evident from a comparison of corresponding entries in Table X, recovery from both physical and mental symptoms occurred simultaneously in the greater number of cases in which both types of symptoms had been present, although improvement in the mental status had been, in many cases, somewhat more difficult to achieve. Thus, the conversion and anxiety hysterias responded rather readily to therapy, whereas pure obsessive-compulsive symptomatology proved highly recalcitrant to any form of superficial treatment. Nevertheless, for the entire group of patients (totals, Table X, bottom row) the rates of improvement in the two classes of symptoms approached each other fairly closely.

(4) *Average environmental readjustments of non-institutionalized patients* (Table X, columns 18 to 23, and code).—These, of course, were difficult to determine accurately, although attempts were made (whenever these were possible and considered ethical) to check the statements of each patient with information from physicians, relatives, friends or employers. As may be seen in Table X, the conversion hysterics seem to have attained the greatest degree of readjustment, whereas the psychopathic personalities, despite their fairly satisfactory clinical improvement, continued to be least able to fit themselves to social, occupational, familial and other requirements.

(5) *General level of recovery in the various groups.*—Column 33 of Table X lists the percentage of patients in each diagnostic group who at one year after their discharge from the hospital still showed definite improvement in the symptoms for which they had entered the Clinics ; in the same manner column 34 lists the percentage of those who had made an even better clinical recovery, and had, in addition, readapted themselves occupationally and socially at a fairly satisfactory level (*cf.* code and footnotes, Table X). The statistical value of these figures as applied to any single neurosis is, of course, diminished by the smallness of the individual groups ; nevertheless, if the 29 cases of neuroses of all types be considered together, fairly significant figures may be obtained. Grouped in this way, 59% of the psychoneurotic patients showed a moderate but nevertheless definite improvement, whereas 48% of patients attained a fairly stable degree of clinical recovery. The statistics for the other groups, although less favourable, are also far from discouraging : 54% fair and 31% good clinical recoveries in the " psychopathic personalities ", and 46% and 25% of each in the schizophrenias. It is of importance, moreover, to

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note that had our investigations of the actual status of our patients been less detailed and exacting, each of these figures would have been considerably higher, since many patients claimed to have reached a degree of improvement which was not substantiated by supplementary reports from independent sources and by the direct psychiatric re-examination.

Degree of Insight.

Table XI lists the degree of retention of adequate insight into previously unrecognized emotional conflicts, as estimated in the re-check interview with each patient approximately one year after his discharge. As might be expected, the patients who had suffered from conversion neuroses which had responded most favourably to psychotherapy showed the greatest degree of insight, whereas a satisfactory degree of self-understanding and emotional readjustment was less frequently found in the psychopaths and in the schizophrenics, although, as previously noted, even in these patients psychotherapy had been far from ineffective. While the positive correlation between insight and clinical improvement (*cf.* Tables XI and XIII) held true as a general rule, nevertheless, it was highly significant that in many cases relief from symptoms and adequate social recovery had been achieved through suggestion and environmental readjustments without any real understanding on the patient's part of the rationale of the therapy that had been adopted. This was borne out in a striking manner by a compilation (Table XI, columns 9 and 10) of the reasons that 55 patients selected, in retrospect, as being most likely to account for their symptomatic improvement. Thus, 14 patients who had remained fairly well for over a year or more after discharge admitted that they had "once been nervous", but maintained that their recovery had been due mainly to the "medical treatment" (rest, psychotherapy, sedation, etc.) that they had received while in the hospital. Similarly, other reasons given almost as frequently were, to quote typical verbatim samples: "I just forgot about being nervous"; "I took a vacation and rested up"; "I just got over the nervous breakdown, that's all"; "I did as you said and went back to work, and it seemed to turn out all right"; and so on. In 6 patients even greater intrapsychic scotomata were present; these ascribed their cures to new religious affiliations after their hospital stay, treatment by cultists, etc. True, even in these cases further questioning revealed that the insight, fragmentary though it may originally have been, that had accompanied their symptomatic improvement during their hospital stay had not really been completely dissipated after their discharge, and that these patients still had some inner appreciation of the nature and consequences of their emotional difficulties. Nevertheless, the fact remained that in many cases who had shown satisfactory clinical recovery, adequate insight had apparently been too narcissistically traumatic, and had

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TABLE XI.—*Estimate of Degree of Insight at about One Year after Discharge.*

Diagnostic Group	No. of pts.	(A) Degree of Insight.							(B) Reasons given by the patient for his improvement.	
		-	o	1	2	3	4	5	Combinations of reasons.	No. of pts.
Adult Maladjustments	3			1	1	1			3 4	2 1
Anxiety States	7		1	1	4	1			3 3-7-8 5 5-1-4 1	2 1 1 1 1
Conversion Neurosis	14		1	5	3	3	1	1	3-5 1-4 8-10-6 1-6 4 2	3 2 1 1 1 1
Manic Depressive	8			3	4	1			3 8 1-4 9	3 1 1 1
Mixed Psychoneurosis	6			1	2	2	1		1 3 4-7	3 1 1
Obsessive Compulsive	2		2							
Paranoia	1					1			11-4-2	1
Psychosis with Drug Intoxication	2			2					13	1
Psychosis with Organic Disease	1	1								
Psychopathic Personality	13		3	5	2	2	1		3 1-6 2 6-4	6 2 2 1
Schizophrenia	28	5	6	7	5	3	2		1 2 3 9-12 14	4 4 3 1 1
TOTALS	85	6	13	25	21	14	5	1		55
Columns	1	2	3	4	5	6	7	8	9	10

CODE:

(A) Estimate of Degree of Insight.

- \- (Column 2) (-1 to -5) Developed further delusions or somatic symptoms as a result of attempts at therapy.
- o (" 3) No insight developed; patient rejects formulation of illness on psychologic terms and rejects psychotherapy.
- 1 (" 4) Does not consciously admit psychogenesis of illness, but instinctively keeps returning to psychiatrist for aid.
- 2 (" 5) Admits psychic nature of illness, but constructs vague rationalizations as to "nerve strain from overwork", "nervous breakdown", etc.
- 3 (" 6) Admits the relationship of emotional difficulties to his illness but insight mainly intellectual, and tendency to blame others for inner conflicts persists.
- 4 (" 7) Realization of the significance and personal origin of his past emotional conflicts, but rejection of insight that would occasion severe narcissistic trauma.
- 5 (" 8) Deeper insight into ambivalence and inner conflicts, including those arising from erotic urges and unjustified aggressive drives, previously repressed.

(B) General Purport of Reasons given by patient for improvement (in order of frequency).

1 (14 pts) Medical or surgical treatment.
2 (8 ") Followed recommendations but without adequate insight.
3 (8 ") "Kept myself busy"; "Forgot about it"; "Just got over it", etc.
4 (6 ") Development of insight and emotional readjustments.
5 (4 ") Period of rest obtained in hospital.
6 (4 ") Readjustment of social relationships.
7 (2 ") Got married.
8 (2 ") Readjustment of family relationships.
9 (2 ") Treatment by cultists.
10 (1 pt.) Readjustment of marital relationship.
11 (1 ") Adequate sexual outlets.
12 (1 ") Conversion to Christian Science.
13 (1 ") Stopped drug intake.
14 (1 ") Physical trauma.

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TABLE XII.—*Changes in Diagnosis of* 100 *Patients after One Year of Follow-up.*

Original Diagnostic Group	Diagnosis changed to:													
				Manic-Depressive										
	No. of Patients	Anxiety State	Conversion Neurosis	Manic	Depressive	Obsessive-Compulsive Neurosis	Psychosis with CNS Pathology	Psychopathic Personality	Schizophrenia	Mixed Psychoneurosis	Mixed Psychosis	Organic Disease	Total No. of Changed Diagnoses	Same diagnosis
Adult Maladjustment	3	1			1						1		3	
Anxiety State	7									3	2	1	6	1
Conversion Neurosis	14						1	1	2	3		2	9	5
Manic-Depressive	8							1					1	7
Mixed Psychoneurosis	6											1	1	5
Obsessive-Compulsive Neurosis	2								1				1	1
Paranoia	1													1
Psychosis with Drug Intoxication	2						1						1	1
Psychosis with CNS Pathology	15										1		1	14
Psychosis with Organic Disease	1								1				1	
Psychopathic Personality	13					1			2	2	2		7	6
Schizophrenia	28		1	2		1				1	5		10	18[1]
TOTALS	100	1	1	2	1	2	2	2	6	9	11	4[2]	41	59
Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14

FOOTNOTES: [1] Type of schizophrenia "mixed" in 12 of 18 cases.
[2] Cf. Table 10, Column 3, and footnotes.

therefore been repressed to a degree that, theoretically, rendered likely a recurrence of their neurotic reactions should the unresolved emotional stresses ever again become too great.

Changes in Diagnosis as a Result of the Follow-up Study.

Perhaps the most significant series of findings (Table XII) to emerge from this study was that careful observation of the extra-mural course of many patients for a year or more after their discharge revealed the development of so great a variety of symptomatic and emotional disturbances in each patient that the original "diagnosis" could no longer be applied. In fact, the multiformity of the reaction types disclosed after a careful historical study of even a single case so transcended the usual nosological boundaries that justification could be found for the proposition that nearly all of the patients could be diagnosed as "mixed psychoneurotic" or "mixed psychotic". In support of this contention reference may be made to Table XII, which lists in detail the number and nature of the changes that had to be made in each diagnostic group at the end of only a year of follow-up study of the 100 patients. An analysis of this table reveals: (*a*) That in no less than 41 of the cases the external manifestations changed so markedly that a major revision in the nosological classification was found necessary; (*b*) that the diagnosis tended to shift from neuroses to mixed forms of psychoses rather than in the reverse direction (5 cases); (*c*) that 4 patients developed previously unrecognized organic diseases that furnished a somatic basis for symptoms previously considered psychogenic; and (*d*) that even in the schizophrenias, where the primary diagnosis remained fairly stable, the sub-classification (catatonic, paranoid, hebephrenic, etc.) changed in 12 of the 18 cases. These findings indicate, therefore, either that the original diagnostic groupings of our patients as made by our psychiatric staff had been in gross error in many cases, or that the nosological concepts that had been used were themselves of little prognostic, therapeutic or heuristic value.

Inter-relationships of Degree of Intra-mural Recovery with Insight at Discharge, Prognosis at Discharge and Status of Patient One Year Later.

As a final summary of our results, Table XIII was prepared as follows: Each of the four factors capable of a scale rating of -5 to $+5$ according to the criteria cited in Tables VII, X and XI, was paired with each one of the three other factors and the corresponding triplicate pairs of contingency coefficients determined for all of our patients, excluding only the 16 patients with organic psychoses in whom the degree of insight could not be expected to have any direct relationship with prognosis or ultimate recovery. The results of

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these calculations, as presented in Table XIII, can be formulated briefly and non-mathematically as follows :

(1) The success attained by intra-mural therapy has a remarkably high (but not unitary) positive correlation with the degree of insight achieved by the patient.

(2) The attainment of a satisfactory degree of intra-mural recovery with some degree of insight justifies a favourable prognosis at one year.

(3) The prognosis at discharge (good, guarded or unfavourable) is highly correlated (+ ·68) in our series with the actual status of the patient at one year, indicating mathematically that the factors taken into consideration in our prognoses were probably valid.

TABLE XIII.—*The Contingency Inter-correlations of the Degree of Intra-mural Recovery, Insight at Discharge, Prognosis at Discharge, and Status of Recovery at One Year after Discharge in* 84 *Cases of Neurosis and Functional Psychosis.*

	Intramural Recovery	Insight	Prognosis	Status at One Year
Intramural Recovery	--	+.66	+.66	+.63
Insight	+.66	--	+.71	+.67
Prognosis	+.66	+.71	--	+.68
Status at One Year	+.63	+.67	+.68	--

(4) Ultimate recovery can occur without adequate insight, but in view of the positive contingency of + ·68 between these two variables, such recovery is relatively infrequent.

These statistical derivations are, perhaps, tautological ; nevertheless, since they are the outcome of an independent and objective statistical treatment of the data, they lend strong support to similar inferences previously reached by clinical observation.

Summary.

One hundred patients who had been studied in the Division of Psychiatry of the University of Chicago Clinics were re-examined a year or more after their discharge in order to evaluate the validity of the diagnoses made during their hospitalization and the results of the various forms of treatment employed. A detailed tabular and statistical analysis of the data showed that :

(1) The mean age of our patients was about 29 years, their average schooling 10·4 years, and their average length of stay in the hospital 24 days. About

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three-fourths of our patients were female, the majority were unmarried, and a disproportionate number of them (about 20%) belonged to the Jewish race. Over a third of the patients in our series were referred by other medical or surgical divisions of the University of Chicago Clinics, whereas only about one in seven sought psychiatric help on her own initiative.

(2) In over three-fourths of the cases studied, a psychiatrically significant history was obtainable from the patient alone. In about half of the cases in which this was impossible, light narcosis produced by the injection of sodium amytal was of definite aid in inducing the patient to supplement the anamnesis with essential details. The success or failure of this procedure, however, was not of differential diagnostic import.

(3) A history of marked abnormalities of behaviour in childhood was obtainable in about three-fourths of the patients diagnosed as "psychopathic personality", in 65% of the schizophrenic group, and in about half of those whose illness was predominantly psychoneurotic, whereas comparable behaviour abnormalities were present in only 3 of 17 organic cases in a group used as a control. The nature of early aberrations in behaviour differed somewhat from group to group, but not to a degree sufficient to be pathognomonic of later reactions; similarly, the various forms of neuroses and psychoses could not be definitely correlated with corresponding "personality types". However, there frequently occurred in all of the sub-groups a type of individual—herein termed the "puerile personality"—characterized by emotional immaturity, social inadequacy, and varying lifelong autoplastic and alloplastic manifestations of neurotic tendencies.

(4) Except for a fairly well demarcated anxiety syndrome the various disturbances in somatic and mental function complained of by the patients varied widely in the several diagnostic categories, indicating the mixed character of nearly all neurotic and psychotic reactions. Depression and anxiety were the most frequent disturbances of affect, whereas distortions of thinking and feeling appeared in all the groups in various gradations, e.g., hypochondriacal preoccupations or various obsessions could be traced through an almost unbroken series of transitions into phobias, feelings of unreality or frank delusions.

(5) In over a third of the patients in the neurotic group there could be detected, by careful diagnostic methods, an organic disease which contributed to the patient's complaints and which required definite medical or surgical treatment. In an evaluation of the psychopathology it was found in nearly all cases that the emotional factors were highly complicated, and involved varying degrees of conflict and maladjustment in the sexual, familial, marital, occupational and religious life of the patient.

(6) However, under a regime which included all indicated forms of medical treatment and psychotherapy, definite improvement could be obtained during the period of hospitalization in approximately 65% of patients whose illness

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was predominantly neurotic, in 55% of those with affective psychoses, and in 30% of those in whom schizophrenia was diagnosed.

(7) The prognosis in an individual patient could not be closely related to the diagnosis assigned to him, but was dependent on a number of factors, including the patients constitution, previous reactions, duration and severity of present illness, depth of conflict, degree of *rapport*, insight obtained and milieu to which the patient returned.

(8) Poor co-operation in therapy on the part of the patient and his family occurred in about half the cases, most frequently because of an unconscious, but nevertheless manifest desire on the part of both the patient and his family to continue their neurotic relationships in lieu of undertaking difficult emotional and environmental readjustments.

(9) A follow-up study of 100 patients a year or more after their discharge showed that 4 of them developed somatic diseases, the signs of which were either not present or were not elicited during their stay in the hospital. Nine of the patients died within a year after their discharge; 3 of these were in the group of organic psychoses, whereas 2 schizophrenic patients who had been removed from the hospital against advice committed suicide. Nevertheless, about 60% of the patients who were treated for neuroses showed definite improvement in both their physical and mental symptomatology; moreover, two-thirds of these attained a degree of recovery that permitted satisfactory and stable occupational, marital and social adjustments, although in no case was a complete reorganization of the personality, such as might have been effected by psycho-analysis, achieved or attempted. The corresponding statistics in the other functional groups were also encouraging, i.e., 54% fair and 31% good clinical improvement in the "psychopathic personalities", and 46% fair and 25% good improvement in the schizophrenics.

(10) Only about a third of our patients retained a satisfactory degree of insight into their previous emotional conflicts after these had been partially resolved by psychotherapy and environmental readjustments; fortunately, however, the correlation of depth of insight and extent and stability of clinical recovery was not absolute.

(11) The prognostic and heuristic value of the present system of psychiatric nosology of the neuroses and minor forms of the psychoses is challenged by the high incidence of "mixed" cases in our series, and by the observation that during only a year of follow-up study a major revision in the "diagnosis" had to be made in more than 40% of the patients.

(12) A mathematical investigation of our data by the method of contingency coefficients yielded results that, within the numerical limitations of the group, supported the clinical inferences already stated. However, an investigation of a larger number of patients over a period of five or more years by methods similar to those outlined in this paper is needed to establish the theoretical and clinical significance of these conclusions.

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Appendix : Discussion and Review of the Literature.

Diagnostic Problems.

Interrelationships of " Personality Types " and Mental Disease.

During the past decade there has arisen a considerable amount of dissatisfaction with the formulations of Kretschmer, Jung, Bleuler, Titley and others that particular psychopathological states are most likely to develop in individuals with certain pre-psychotic "personalities", i.e., schizophrenia in "introverts" or in " schizoid personalities ", manic-depressive psychoses in " cyclothymics " and so on. In our experience, such clinical correlations have been found to be misleading about as often as they have been of diagnostic value—a conclusion that apparently has also been shared by other recent investigators. To cite but one example, Lewis and Blanchard, in a study of 100 recovered cases of schizophrenia, report that in fully 36% of their patients the pre-psychotic personality type was "cyclothymic-extravert" rather than " schizoid ", i.e., the patient could justifiably have been described as cheerful, optimistic, friendly, flexible, energetic and gregarious despite the circumstance that the economic, social and sexual adjustments of many of them had been inadequate for a long period before the development of their acute illness.

Transitions from Neurotic to Psychotic Disorders.

Concurrent with the trend to abandon rigid categories of " personality type " there has appeared in recent years a tendency to recognize the qualitative interrelationships of the various neuroses and psychoses. Thus, Leslie Hohman, in discussing affective disorders, states: "I do not distinguish between neurotic and psychotic affective disorders except quantitatively. Qualitatively, I do not accept the distinction. . . . I (am) prepared to abandon many of the descriptive categories which were used because I cannot see from my group of cases that they contribute any diagnostic, therapeutic or prognostic value."

Harrowes, writing in 1931, implies a similar intimate relationship between neuroses and psychoses. This author shows that since the first description of " progressive hebetude " by Willis in 1674 many writers, including Bleuler, have described " neurasthenic, neurotic and compulsive symptoms " in early schizophrenia. Harrowes quotes Buell as saying, " I have discovered any number of patients who were neither clear-cut schizophrenic nor psychoneurotic . . . there are all sorts of transitions ". From his own studies of 100 recovered cases of schizophrenia, Harrowes concluded that the pre-psychotic personality type of his patients (*a*) cannot be definitely correlated with the outcome of the case, (*b*) that " progression from a neurotic to a psychotic reaction not uncommonly takes place ", and (*c*) that this change is not of " diagnostic, therapeutic or prognostic " import. These findings agree

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well with the data of this study—especially those summarized in Tables IV, V, VI and X—and demonstrate in another light the inexactness and lack of stability of current clinical concepts.

The Analysis of Psychiatric Syndromes: Mathematical Method.

T. V. Moore has approached the problem of the interrelationships of psychiatric syndromes by means of a statistical technique* employing tetrachoric correlations of 26 factors and symptoms independently graded in 367 mental patients. On the basis of his objective studies Moore was able to erect a number of clinical categories which, while they correspond for the most part with standard psychiatric classifications, nevertheless demonstrate a certain unity inherent in all mental disease. On this point Moore writes: "We find as a matter of fact that while each syndrome is to a large extent independent of every other syndrome, nevertheless the partial overlapping that is present is due to the fact that underlying all the syndromes there is a super-general factor (termed by Moore 'the schizothymic factor') which links them together in a unit . . . the general factor of the depressive mental disorders is not without relation to that of the præcox group." Moore, for example, finds mania, especially in its non-euphoric form, more closely related to schizophrenia than to the circular insanity of Kraepelin, thereby agreeing with Lange, who states that "schizophrenic patients through long years manifest circulating psychoses with typical manic and melancholic pictures; indeed, typical mixed states make their appearance in the patients before the schizophrenic trends become clear". On the same statistical basis Moore, in dealing with the depressions (p. 35), states that "constitutional hereditary" or "anxious depressions" show a trend toward paranoid dementia præcox, whereas the "retarded depressions" are inclined to catatonia, although the two forms of depression show a marked tendency to combine with each other (pp. 40 and 50). Similarly, Moore states that his data justify the subdivision of manic reactions into (*a*) "euphoric mania" (largely hereditary and distinguished from paranoid schizophrenia by a tendency to clear and relapse) and (*b*) non-euphoric mania or "paranoia irritabilis"—a syndrome with definite schizophrenic proclivities, but distinguishable from the simple dementia præcox of Diem and the catatonia of Kahlbaum by destructiveness, marked irascibility and long duration. In view of these statistical intercorrelations among the affective, schizophrenic and paranoid psychoses, Moore concludes that there is, in the causation of mental disease, (*a*) a "super-general ætiological

* Franz Alexander, in a recent article (*Amer. Journ. Orthopsychiat.*, 1934, iv, p. 33), has written a pertinent discussion of the limitations of the statistical method in dealing with the data of psychology and psychiatry. While his indictment of the naïve misapplication of mathematical techniques in these fields is entirely justified, the implications of his own views as to absolute causality in the sphere of mental action are not in accord with current scientific and metaphysical concepts.

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factor " and (*b*) " specific causal factors " for the various interrelated syndromes. Further, in the case of the schizophrenias, Moore suggests that these two factors may correspond to certain dihybrid hereditary characteristics of schizophrenia, as postulated by Rüdin, Coller, Hoffman and others. However, whether or not this duplicity of " super-general " and " specific " causation of the psychoses is of a greater significance than, for example, the manifestly tautological statement that death implies (*a*) the general destruction of the organism (a " super-general factor ") due in specific cases to (*b*) various terminal diseases (i.e., " specific factors "), the important conclusion to be derived from Moore's work is that all the functional psychoses are sufficiently intercorrelated from the standpoint of vector analysis to justify the hypothesis of a common ætiological and symptomatic background. While it is true that Moore dealt mainly with psychotic symptoms and subjects, his work nevertheless seems applicable to the entire field of mental disease, and his inferences agree well with our findings as to interrelationships of ætiology, symptomatology and prognosis of the various nosological sub-groups in both neuroses and psychoses.

Interrelationship of Psychiatric Syndromes : Clinical Studies.

Bard and Braceland, in their report of a five-year follow-up study of 710 patients admitted to the Pennsylvania Hospital in the years 1927 and 1928, reach a number of conclusions of particular interest from the standpoint of the present investigation. Bard and Braceland, using the same system of classification of mental diseases as is employed in this study (i.e., the Revised Classification of Mental Diseases, *Statistical Manual*, 1934), subdivide their patients into as many as seventeen nosological groups, yet are unable to fit 72 patients (over 10% of the entire series) into any one of the categories adopted. With regard to this point the authors further state : " We agree that it (the *Statistical Manual*, 1934) is the best classification to be had at present . . . nevertheless, we are far from satisfied with our diagnoses, even after we have built up a large unclassed group. Some cases show more than one psychosis, some seem very definitely placed exactly between two groups. . . . There is nothing we should like better than having two other psychiatrists divide these cases into groups and then to have the privilege of criticizing their arrangement."

The results of the five-year follow-up study of Bard and Braceland is summarized in Table XIV, which is adapted from their article. A comparison of this table with our Table X reveals a number of interesting points, which may be summarized under the following headings :

(1) *Distribution of diagnoses.*—A comparison of column 2 of the table of Bard and Braceland (Table XIV) with column 1 of Table XII will reveal that, excluding the identical incidence (1%) of paranoia in both series of cases,

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there is almost no correspondence in the several nosological groups in the two series. Although this difference of distribution could possibly be partly attributed to the differences in the geographic, economic, social or racial characteristics of the populations served respectively by the Pennsylvania Hospital and the University of Chicago Clinics, it must nevertheless be considered that both are private hospitals with selected admissions, situated in metropolitan districts and similar in set-up and the type of service rendered. A more cogent explanation of the lack of correspondence in the differential diagnoses of the two series, therefore, is that, in general, psychiatric syndromes are so protean in their manifestations as to be differently classified by competent observers with only slightly different orientations.

TABLE XIV.—*Outcome Five Years after Admission.*

	No. of Cases	%	Re-covered	%	Im-proved	%	Unim-proved	%	Dead	%	Lost
Dementia praecox	116	19%	12	11%	25	24%	66	62%	10	9%	3
Manic depressive	171	27%	86	50%	19	11%	30	17%	24	14%	12
Paresis	38	6%	13	34%	8	22%	5	14%	12	32%	..
Involutional Melancholia	47	8%	12	26%	10	21%	10	21%	13	28%	2
Somatic Disease	60	9%	22	37%	8	13%	3	5%	23	39%	4
Senile	50	8%	2	4%	4	8%	8	16%	31	62%	5
Alcoholics	10	2%	1	1%	..	..	3	30%	2	20%	4
Psychoneuroses	37	6%	21	57%	7	19%	4	11%	3	8%	2
Paranoid conditions	9	1%	3	33%	3	33%	2	22%	..	..	..
Unclassed	72	11%	27		13		11		8		13
Psychopaths	8	1%	..	..	4	50%	2	25%	1	12%	1
Encephalitics, adult	8	1%	1	12%	1	12%	2	25%	2	25%	2

(Adapted from Bard, H.D. and Braceland, F.V.: Prognosis in Mental Disease. American Journal Psychiatry, Vol. 94: 263 (Sept.) 1937.)

(2) *Recovery-rates.*—The incidence of recovery in the series of patients studied by Bard and Braceland cannot be exactly compared with that in our series, inasmuch as the time interval of follow-up differs in the two studies, and also because Bard and Braceland do not specify the criteria they used in assigning the degree of improvement in their patients. Nevertheless a comparison of columns 4, 6 and 8 of their table (*cf.* Table XIV) with columns 24 to 34 of Table X will reveal, in general, a fair degree of correspondence in the ultimate recovery-rates in the various sub-classifications, indicating again the probable similarity in amenability to therapy of the patients in the two series. This may, perhaps, be most easily exemplified in the fact that 32% of the patients studied by Bard and Braceland are reported as "recovered", whereas the 38% of our patients showed a "3 plus recovery" at the end of the one-year period.

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But this comparative constancy in the recovery-rates of specific psychiatric syndromes—if it could be established—would seem to furnish an argument against the concept of the indefiniteness of these syndromes and the almost infinite variety of their gradations and combinations. And, as a matter of fact, certain "recovery-rates" seem to hold true for the larger clinical groups; for instance, Harrowes reports 22% of stable recoveries in "schizophrenia" as comparable with 25% in our series (Table X), Hohman reports 59% stable recoveries in manic-depressives, corresponding to 62% in our series, and other authors (e.g., Carney Landis *et al.*; *vide infra*) believe that the various psychoses and neuroses have each a characteristic and mainly spontaneous incidence of improvement. However, these considerations lose their cogency when it is remembered how many psychiatric "diagnoses" are amended *post hoc*, i.e., a "neurotic" becomes a "psychopathic personality" or a "borderline schizoid" if he stubbornly refuses to get well, while on the other hand, a schizophrenic, even though unequivocally so diagnosed, could not—if he happens to recover—possibly have been schizophrenic at all. With the diagnostic categories thus weighted, their recovery-rates obviously become less characteristic of the syndromes themselves than of certain prognostic connotations empirically and in great part unjustifiably attached to our present nosological schema.

(3) *Importance of organic factors*.—The high incidence of organic disease in our patients is also in accord with the observations of Comroe, who, in a follow-up study of 100 cases of neuroses, notes that the early stages of various organic illnesses are frequently overlooked, and reports that 24% of the subjects of his study presented definite evidence of organic disease within eight months after the diagnosis of "neurosis" had been made. Comroe emphasizes the fact that a neurosis may be the forerunner or the aftermath of an organic disease, or that the two very frequently co-exist—a conclusion in agreement with our data, which show some degree of organic involvement in 42 of our 83 "functional" cases (Table VI).

Follow-up Studies.

Prognosis.—In a study of 90 patients removed from the Maudsley Hospital, London, by relatives despite warnings that the patients were "dangerous to themselves or others", Minski was able to trace the status of 73 patients three years after their discharge. Of this number, only 21 had recovered completely without relapse, whereas in the 27 cases involving suicidal risk only 3 mistakes in prognosis had been made. In view of the fact that the cases were widely distributed among the various types of psychoses, this comparative accuracy of prognosis in Minski's cases, as in our own, appears to be based less on the diagnostic label applied to the case than on the comprehensive evaluation of the factors influencing the probable outcome of each patient individually

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considered. With a similar lack of relationship to "clinical sub-classification" Hohman was able to prognosticate recovery correctly in 69 of 82 manic-depressive patients, and to predict lack of recovery accurately in 27 of 40 cases, indicating again that an intellectual (and probably also an almost intuitive) appreciation of many factors inexpressible in any simple "diagnosis" is necessary for a pragmatic clinical appraisal of any individual case.

Rates of recovery.—In 1935 Wootton, Armstrong and Lilley traced the fate of 131 patients discharged from the Ewell Mental Hospital, Epsom, England, in the years 1928 to 1931. Of the 131 patients, 77 were found to be well, 8 had had minor relapses and 17 had suffered major ones. Of the 47 schizophrenic patients discharged 18 were well, and an even higher recovery-rate—8 of 16 discharges—was found in the puerperal psychoses. The authors conclude that in mental disorders as a group the first year after discharge from institutional care is the period in which relapse is most likely to occur, but that in schizophrenia a second danger period occurs during the third year. These findings lend a degree of conservatism to our own figures as to the recovery-rate of schizophrenic patients at one year after discharge, since, according to the study quoted, the relapses should be comparatively frequent in that period. It will be of interest in a future follow-up study to determine whether the relapse-rate in our patients also increased during the third year.

Criteria of recovery.—Skottowe and Lockwood, in a study of the fate of 150 patients treated in a psychiatric out-patient department, reported statistics on the results of superficial therapy that are much in accord with ours. While their article will be more fully discussed in connection with a separate report dealing with the results of therapy in our own out-patient department, it may nevertheless be of interest to consider briefly the criteria they employed to estimate the degree of recovery in their patients. Thus, Skottowe and Lockwood classified as—

(*a*) "Recovered": those patients who achieved "social reinstatement" and "complete freedom from subjective symptoms".

(*b*) "Much improved": social reinstatement with some residue of subjective symptoms.

(*c*) "Improved": benefited by treatment, but not to the extent of securing social reinstatement.

If these criteria are compared with those adopted in our study, it will become evident that the latter were intentionally made somewhat more specific and exacting in order to render possible a more accurate and objective grading of the recovery-rates in our patients. However, if our seven gradations of improvement are combined into two, it will appear that the rates of recovery in our hospital patients parallel closely those reported by Skottowe and Lockwood, namely, about 35% of the patients reported by these authors "recovered" or were "much improved" as compared with 38% of "3 +" or better in our series, whereas 65% of their patients achieved only moderate

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improvement or less as compared with 62% of " o " to " 2 + recoveries " in our series. Nevertheless, this parallelism of results does not necessarily imply that therapy given in an out-patient department is as successful as that given during a hospital admission, since it must be considered that patients who require hospital care usually suffer from the forms of neurosis or psychoses that would in many cases not respond satisfactorily to the forms of therapy possible in out-patient work.

TABLE XV.—*Diagnosis and Results of Therapy of " Functional Syndromes " in Patients treated at the Maudsley Hospital from* 1932 *to* 1935.

<table>
<tr><th rowspan="2">Functional Syndrome</th><th rowspan="2">No. of Cases</th><th rowspan="2">% of Total</th><th colspan="5">Discharges</th><th rowspan="2">% Died, Still in hospital, Committed elsewhere, etc.</th><th colspan="2">Results of Intramural Therapy in our Series (from Table 7)</th></tr>
<tr><th>% Re-covered</th><th>% Im-proved</th><th>Total % Improved</th><th>% Not Improved</th><th></th><th>3+</th><th>2+</th></tr>
<tr><td>Neurasthenia</td><td>163</td><td>7%</td><td>26%</td><td>54%</td><td>80%</td><td>12%</td><td>8%</td><td></td><td></td></tr>
<tr><td>Confusional States</td><td>62</td><td>2%</td><td>31%</td><td>26%</td><td>57%</td><td>10%</td><td>23%</td><td></td><td></td></tr>
<tr><td>Obsessional States</td><td>74</td><td>3%</td><td>11%</td><td>43%</td><td>54%</td><td>20%</td><td>26%</td><td>0</td><td>0</td></tr>
<tr><td>Schizophrenic States</td><td>505</td><td>20%</td><td>11%</td><td>23%</td><td>44%</td><td>14%</td><td>52%</td><td>41%</td><td>22%</td></tr>
<tr><td>Anxiety States</td><td>268</td><td>11%</td><td>16%</td><td>60%</td><td>76%</td><td>8%</td><td>16%</td><td>66%</td><td>66%</td></tr>
<tr><td>States of Depression</td><td>960</td><td>39%</td><td>20%</td><td>30%</td><td>50%</td><td>8%</td><td>42%</td><td rowspan="2">55%</td><td rowspan="2">22%</td></tr>
<tr><td>States of Excitement</td><td>114</td><td>5%</td><td>27%</td><td>8%</td><td>35%</td><td>24%</td><td>41%</td></tr>
<tr><td>Hysteria</td><td>196</td><td>8%</td><td>15%</td><td>46%</td><td>61%</td><td>17%</td><td>22%</td><td>73%</td><td>53%</td></tr>
<tr><td>Moral Abnormalities</td><td>48</td><td>2%</td><td>6%</td><td>58%</td><td>64%</td><td>14%</td><td>22%</td><td></td><td></td></tr>
<tr><td>Paranoid States</td><td>70</td><td>3%</td><td>14%</td><td>36%</td><td>50%</td><td>26%</td><td>24%</td><td></td><td></td></tr>
<tr><td>Total</td><td>2460</td><td>Averages</td><td>18%</td><td>38%</td><td>56%</td><td>15%</td><td>29%</td><td>58%</td><td>54%</td></tr>
<tr><td>Columns</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr>
</table>

(Adapted from the Maudsley Hospital Reports, 1932-35.)

A recent quadrennial report from the Maudsley Hospital in London furnishes data that provide other interesting points of comparison with certain of our own results. To mention a few of these only briefly :

Diagnosis.—Table XV, adapted from the Maudsley Report, summarizes the distribution of the diagnoses and the results of therapy at the end of the hospital stay (" mode from three to six months ") of the in-patients at the Maudsley Hospital during the four years ending in 1935. A glance at the percentile distribution of the various diagnoses will show that, as in the series of Bard and Braceland, there is almost no numerical correspondence with the relative incidence of the various diagnostic sub-groups in our own series of cases (Table XII, column 1), probably mainly because certain diagnoses, notably " neurasthenia " and " states of depression ", were made with relatively greater frequency. This disparity in the two distributions may again indicate either that the population served by the Maudsley Hospital is subject to different

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types of mental illness than those that affect our own population, or else that the diagnostic connotations of the various sub-groups here also are so indeterminate—and therefore interpretable in so many different ways—that wide differences of classification must of necessity arise. The latter seems the more probable explanation, and illustrates in another light the looseness and inadequacies of the psychiatric nosological concepts at present in use.

Results of therapy.—For the sake of ease of comparison, our results in intramural therapy are listed in juxtaposition with those of the Maudsley Hospital in columns 8 and 9 of Table XV. Although the figures in column 8 probably indicate the percentage of patients who achieved the same degree of recovery as those included in column 3 of the Maudsley series, whereas column 9 corresponds loosely with column 5, no exact correlations of the statistics can be made, because the Maudsley report does not specify the criteria of recovery nor use the same system of analysis of time intervals. Nevertheless, both series show approximately the same favourable recovery-rates that have been reported in the various follow-up studies of Mapother, Neustatter, Luff and Garrod, Ross and others to be mentioned below. Significantly, no follow-up studies are included in the Maudsley Report, since, according to its authors, these can be considered reliable only under special circumstances. On this point the language of the report is so clear and so much in accord with certain of the theses of the present paper that it merits the following quotation: "With regard to late results almost all evidence is probably valueless which is not based upon an interview between the patient and either the psychiatrist or at least a social worker acting under his immediate direction. . . . When, on the contrary, after some years, the review is based on an interview with the psychiatrist there is often found ground not only for differing from any recent report which may have been furnished, but also for entirely revising the initial diagnosis of the psychiatrist himself and its prognostic meaning."

Comparison of the Results of Various Forms of Psychotherapy.

Carney Landis, in a chapter entitled "A Statistical Evaluation of Psychotherapeutic Methods" in Hinsie's recently published book, *Concepts and Problems of Psychotherapy*, points out that the difficulties in evaluating the results of psychotherapy "arise from a variety of sources: (*a*) the essential nature or cause of the disease is unknown in the majority of the cases of mental disease; (*b*) there is often disagreement of opinion among those qualified to know concerning even the broadest designation, viz., somatogenic, psychogenic or both; (*c*) there is no uniformity of opinion with respect to the usage of such terms as 'cured', 'recovered', 'improved', etc., as they are applied to psychopathological cases". Landis, bearing these reservations in mind, nevertheless adopts two statistical "base-lines", viz., (1) the number of patients recovered or improved per 100 cases admitted to the hospital, and

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(2) the therapeutic outcome of a given group of patients during a stated interval of time. With regard to the first criterion, Landis quotes statistics from mental hospitals in New York State, in the United States as a whole and in several foreign countries to show that the " amelioration rates " for the various psychoses are remarkably constant, and also that the total recovery-rates cluster closely about an average of 40 patients per 100 admissions in the various hospitals throughout the ten years included in the tabulation. Landis then shows (Tables XVI and XVII) that a comparable degree of constancy applies to the second "base-line", namely, that in the statistics for New York State in 1914 and in those for the entire United States in 1933, " civil hospitalization of one year or less yields sufficient improvement for favourable discharge: in one-third of all mental patients; in two-thirds of psychoneurotics, psychopathic personalities and alcoholic psychoses; in more than one-half of manic-depressive cases; in more than one-third of paranoid and involutional cases; and in about one-fourth of dementia præcox cases". The author further notes that certain minor "discrepancies in the figures for dementia præcox and paranoia and in those for manic-depressive and involutional melancholia for 1914 and 1923 are probably directly attributable to changing diagnostic concepts", and that the comparatively constant group differences arrange themselves in decades between 20 and 65. Landis, therefore, places the basic " amelioration rate " for the institutional treatment of the psychoses at 35 to 40 per 100 patients. Then, comparing this " basic rate " with the results of special treatment procedures as given by various authors in a number of recent reports (*cf.* Table XVIII), Landis contends that—

(1) The results of prolonged psycho-analytic treatment (average 17·6 months) as reported by Fenichel in the Berlin Psycho-Analytic Institute Report exceed the expected " amelioration rates " for the various types of mental disease only in the compulsion neuroses, in hysteria and in anxiety hysteria, and even then only by rather narrow margins if the percentage of prematurely discontinued analyses are taken into account.

(2) At the New York Psychiatric Institute, where treatment is given for an average of only 36·3 months, the recovery-rates in the various diagnostic categories are at least equivalent to and, if anything, rather better than those quoted for the Berlin Psycho-Analytic Institute, except again for a slightly less favourable showing in the case of the hysterias.

(3) The same comparisons of recovery-rates hold true for the Maudsley Hospital in London, where the average length of therapy is six months, and for the Cassel Hospital, Penshurst, Kent, where the therapy lasts an average of 4·1 months.

In view of these considerations, Landis concludes: " When we examine the available reports of those institutions specializing in intensive psychotherapy applied to the psychoneurotic patient, it is apparent that the different varieties of intensive work have but little difference in their ultimate effectiveness.

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To repeat the statement of Janet—' The psychotherapist who understands his patient well and who knows how to use psychological stimulation succeeds with any method he cares to use '."

TABLE XVI.—*Number of Patients Discharged Annually as Recovered or Improved per One Hundred Admitted to State Mental Hospitals.*

Diagnosis	New York 1925-34	United States 1923-33	Annual Variability United States 1926-33
Senile	6	10	10-11
Cerebral arteriosclerosis	16	16	15-17
General paresis	24	22	17-25
Dementia praecox	32	39	38-42
Paranoia	43	43	37-45
Involutional melancholia	43	46	43-51
Manic-depressive	66	63	61-67
Alcoholic	64	68	63-76
Psychopathic personality	75	67	61-71
Psychoneurosis	70	68	62-72
Entire hospital population	38	40	39-41

(From Landis, Carney, in Hinsie, Leland B.: "Concepts and Problems in Psychotherapy", Columbia University Press, New York, 1937.)

TABLE XVII.—*Percentage of Mental Patients that are Discharged as Recovered or Improved within One Year of Admission.*

Diagnosis	United States 1933	New York 1914
Senile	9	6
Cerebral arteriosclerosis	16	18
General paresis	21	9
Dementia praecox	30	23
Paranoia	33	37
Involutional melancholia	36	28
Manic-depressive	56	68
Alcoholic	60	63
Psychopathic personality	62	62
Psychoneurosis	66	68
Entire hospital population	34	36

(From Landis, Carney, in Hinsie, Leland B.: "Concepts and Problems in Psychotherapy", Columbia University Press, New York, 1937.)

It is not our purpose in this paper to enter into an extensive discussion of Landis's striking conclusions, which, interestingly, were foreshadowed in part by Esquirol in 1832. It must be considered, however, that the Berlin Psychoanalytic Institute reported rates of recovery or improvement as high as 91%

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in cases carried to completion, meaning, in effect, cases suited for analytic treatment and yet sufficiently severe to induce the patients to submit to this prolonged and expensive form of therapy. Moreover, it may be pointed out that the apparent "stability" of Landis's "basic amelioration rates" is no more than an actuarial phenomenon, which neither proves nor disproves the unity or constancy of mental syndromes.

Nevertheless, Landis's thesis as to the spontaneous recovery-rates in mental illnesses is also supported by the recent study of Curran who, although he used the written questionnaire method, succeeded in obtaining fairly reliable data as to the status of 83 patients one to three years after they had received

TABLE XVIII.—*Prognosis in the Psychoneuroses.*

Institution	Number Treated	Average duration of Treatment (months)	Percent Recovered	Percent Improved	Percent Recovered or Improved
All New York State Mental Hospitals 1917-34	5700	.....	32	40	72
Maudsley Hospital 1931 and 1935	1531	6	15	52	67
Cassel Hospital 1921-33	1186	4.1	45	25	70
New York Psychiatric Institute, 1930-35	119	6.1	40	47	87
Berlin Psycho-Analytic Institute, 1920-30					
Total cases treated	312	....	22	36	58
Total cases completed	200	17.1	35	56	91
Column	1	2	3	4	5

From Landis, Carney, in Hinsie, Leland B. "Concepts and Problems in Psychotherapy", Columbia University Press, New York, 1937.)

a very short course of therapy, administered under unfavourable conditions, for various types of minor mental ailments. Curran found that despite the presumed inadequacy of the therapy received by his patients, 61% could be classified as greatly improved, by which he apparently means that they had returned to work and considered themselves symptom-free or almost so. Of added interest is the fact that in discussing his findings Curran makes a number of comments which reflect the same dissatisfaction with current psychiatric classification that has been implied in so much of the recent literature, and is a major thesis of the present discussion. Thus, with regard to diagnosis and prognosis, Curran writes: "Endless discussion and differences might arise about the correct allocation of the cases under these headings and about the wisdom shown in the choice of the headings themselves. . . . Duration of symptoms is a much better prognostic guide than mere severity." Similarly, with regard to the results of treatment, Curran states: "One of the most encouraging features in psychiatry is that many neuroses (which should

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not be sharply contrasted with the psychoses) do improve when treated in quite simple ways, or as the result of circumstances over which a physician has exerted little or no control . . . (however) . . . there is a fallacy in supposing that improvement which cannot be attributed to intensive psychotherapy must therefore be regarded as being 'spontaneous'."

In this connection, also, it may be noted that the staff of the Chicago Psycho-Analytic Institute has recently issued a report which stresses the difficulties of evaluating the effects of any form of psychotherapy, and the fallacies likely to be inherent in many of the methods ordinarily adopted to estimate improvement. This report discusses the "so-called" "criteria of recovery" with such clarity that the paragraphs dealing with this subject deserve quotation in full since, in our opinion, what the report states with regard to the results of psycho-analysis is also applicable to the results of other therapeutic methods:

"The disappearance of manifest and well-defined symptoms can be used as a sign of cure only in a limited number of cases, and therefore the criteria for therapeutic results are vague and require subtle and expert judgment. In fact, standard criteria for such a judgment are lacking.

"In evaluating therapeutic results the physician who treated the patient and the patient himself are in the best position to form a reliable judgment. The advantage of institute work makes possible an additional check upon the reliability of the judgment of this one physician upon his own work because the research cases are known also to other members of the staff, and thus a kind of collective judgment can be added to the single opinion of the physician responsible for the treatment.

"Great caution must be exercised in evaluating the opinion of so-called objective outsiders, in the estimation of therapeutic results. Individuals in close contact with the patient usually stand in an emotional relationship to him. In many cases they have motives for preferring the patient in his neurotic state. His equally neurotic wife may have married him on account of his neurotic traits; his child may have liked his neurotic indecisiveness and inclination to give in to every demand, his inhibited submissive nature may have been more comfortable for his employer, and his friends may have been amused by his eccentricities. Therefore it is not unusual for a psycho-analytic treatment to excite unfavourable comment on account of those very changes in the patient which indicate the success of the treatment. For these reasons, final judgment of the therapeutic results of treatment must rest with the patient and with the physician who treated him. This can be supplemented as stated in this report by the judgment of other well-trained analysts who are familiar with the patient's problems and the course of treatment. The opinion of other informants, including physicians not trained in this field, can be used only with great caution. . . .

"A further difficulty is common to estimates of the results of treatment in all branches of medicine. Because a patient improves after treatment it is not always safe to infer that his improvement is a result of the treatment. Altered life situations may result in marked changes in mental conditions and some cases are capable of spontaneous remissions. On the other hand such radical alterations in the life situation over periods so long as those we are

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considering are infrequent, and when they do occur only affect the emotional life profoundly in certain cases. Moreover, both analyst and patient can usually tell with considerable accuracy just how much the patient's change is due to the analysis and how much to external circumstances. None-the-less, it is necessary to admit that the inference that improvement following an analysis is a result of treatment must be made with some reservations. Of course it is much easier to bring about improvement in symptoms than it is to alter the organization of the personality which is the fundamental problem in most analyses."

With regard to the therapeutic results of psycho-analysis, the report of the Chicago Psycho-Analytic Institute lists the following proportion of cures or marked improvements in cases analysed longer than six months, and followed up at one month to four years after the analysis: Psychoneuroses, 63%; disturbances of sexual function, 50%; character disturbances, 71%; organ neuroses, 78%; epilepsies, 50% (4 cases); miscellaneous, 55%. As in the case of the Berlin Institute, if the number of patients who discontinued their analysis at the Chicago Institute or were dismissed as non-analysable is taken into consideration, each of these figures will be reduced by about one half, so that the results in all patients in whom psycho-analysis was attempted will appear to be much less favourable. However, here again it must be emphasized that any estimate of the effects of a therapeutic procedure must depend primarily on its aims and standards, and that the criteria used to evaluate the results of a formal psycho-analysis are methodologically far more searching and exacting than those employed in this study. Nevertheless, it is of interest to point out that our clinical therapeutic results, taking into account the smallness of our series, conform with the revised figures of the Chicago Psycho-Analytic Institute (and also with Landis' statistics) both as to the rates of recovery and improvement at one year in the various diagnostic sub-groups (Table X) and in the general recovery-rate, namely, "3 + recovery" in about 40% of all patients treated.

Finally, the closing words of Macfie Campbell's *Destiny and Disease in Mental Disorders* may be quoted as a fitting epilogue to the present study:

"No general formula can do full justice to the particular circumstances of the individual case. General formulæ are dignified, and diagnostic terms give comfort, but they are verbal symbols which are apt to do violence to the complexity of the facts. Out of respect for the facts we may be shy of certain diagnostic terms, even though we thereby deprive ourselves of a pleasing resting place. Whoever fails to use the familiar verbal symbols may be accused of diagnostic nihilism or of lack of pious recognition of the labours of his predecessors, who with unremitting toil constructed their orderly schemata. One may seem to be a disturber of the peace if one rejects familiar diagnostic terms, and insists that more important than the formal diagnosis of the case is its formulation in terms of the familiar forces of human life, based on the painstaking dynamic analysis of the patient and his relation

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to the environment. With such an outlook the neglect of conventional diagnostic terms may lead to some complaint from our professional colleagues, but our patients at least will not be able to reproach us with having failed to do our best to understand the travail of their spirit, their needs, and their goals, and to bring whatever relief is available to strengthen their bodies, re-establish their personal equilibrium (and) restore them to their place in the social group."

References.

Bard, E. D., and Braceland, F. V.—" Prognosis in Mental Disease," *Amer. Journ. Psychiat.*, September, 1937, xciv, p. 263.

Campbell, C. Macfie.—*Destiny and Disease in Mental Disorders, with Special Reference to Schizophrenic Psychoses*, Thomas W. Salmon Memorial Lectures, W. W. Norton & Co., Inc., New York City, 1935.

Chicago Institute for Psycho-analysis, *Five-Year Report* (1932–1937), 43, East Ohio Street, Chicago.

Comroe, B. L.—*Journ. Nerv. and Ment. Dis.*, June, 1936.

Curran, D.—" The Problem of Assessing Psychiatric Treatment ; St. George's Hospital," *Lancet*, October 30, 1937, ccxxxiii, p. 1005.

Deem, Otto.—" Die einfach demente Form der Dementia Præcox," *Arch. f. Psychiat. u. Nerven.*, 1903, xxxvii, p. 111.

Entres, J. L.—" Die Ursachen der Geisteskrankheiten " *in* Bumke's *Handbuch der Geisteskrankheiten*, vol. i, 1928, pp. 50–307.

Esquirol.—*Des Maladies Mentales.* Quoted in personal communication by Dr. David Slight.

Harrowes, W. M.—" Significance of a Neurotic Reaction as a Precursor of Schizophrenias," *Journ. Ment. Sci.*, April, 1931, lxxvii, p. 375.

Hinsie, Leland B.—*Concepts and Problems of Psychotherapy*, Columbia University Press, New York, 1937.

Hoffman, H.—*Die Nachkommenschaft bei endogenen Psychosen*, Julius Springer, Berlin, 1921.

Hohman, L. B.—" A Review of 144 Cases of Affective Disorders after Seven Years," *Amer. Journ. Psychiat.*, September, 1937, xciv, p. 303.

James, G. W. B.—" Prognosis of Puerperal Insanity," *Lancet*, June 29, 1935, ccxxviii, p. 1515.

Kahlbaum, K.—*Die Katatonie, oder das Spannungsirresein*, Berlin, 1874, p. 104.

Kraepelin, Emil.—*Psychiatrie*, eighth edition, Leipzig, 1913, p. 1183.

Lange, J.—" Die endogenen und reaktiven Gemütserkränkungen und die manisch-depressive Konstitution," *in* Bumke's *Handbuch der Geisteskrankheiten*, Berlin, 1928, Spezieller Teil 11, p. 202.

Lewis, N. C., and Blanchard, Elsie.—" Clinical Findings in Recovered Cases of Schizophrenia," *Amer. Journ. Psychiat.*, xi, 401, pp. 31–32.

London Clinic of Psycho-Analysis, Ernest Jones, Editor, *Decennial Report*, May, 1926, to May, 1936. 96, Gloucester Place, London, W. 1.

Luff, Mary C.—" Assessment of Psychiatric Treatment," *Lancet*, November 6, 1937, ccxxxiii, p. 1103.

Idem and Garrod, M. P.—*Brit. Med. Journ.*, 1935, ii, p. 55.

Mapother, E.—Maudsley Hospital (University of London). *Medical Superintendent's Report*, period from January 1, 1932, to December, 1935.

Idem.—Brit. Journ. Med. Psych., 1927, vii, pt. 1, p. 57.

Minski, L.—" An Investigation into the After-History of 90 Patients Discharged from a Mental Hospital against Advice," *Journ. Ment. Sci.*, 1935, lxxxi, p. 509.

Moore, T. V.—" The Empirical Determination of Certain Syndromes Underlying Præcox and Manic-depressive Psychoses," *Amer. Journ. Psychiat.*, 1930, ix, p. 719.

Idem.—" The Essential Psychoses and Their Fundamental Syndromes," *Studies in Psychology and Psychiatry*, June, 1933, iii, No. 3, Williams & Wilkins, Baltimore.

Myerson, Abraham.—" Neuroses and Neuropsychoses : The Relationship of Symptom Groups," *Amer. Journ. Psychiat.*, 1936, xciii, pp. 263–301.

National Committee for Mental Hygiene. *Statistical Manual for the Use of Hospitals for Mental Diseases*, 50, West 50th Street, New York City, 1934.

Neustatter, E.—*Brit. Journ. Med. Psych.*, 1927, vii, pt. 1, p. 57.

https://doi.org/10.1192/bjp.84.353.893 Published online by Cambridge University Press

ROSS, T. A.—*An Enquiry into Prognosis in the Neuroses*, London, 1936.

Idem.—*The Common Neuroses*, second edition, 1937, Edw. Arnold & Co., London.

RÜDIN, E.—*Zur Vererbung und Nerventstehung der Dementia Præcox*, 1916.

SKOTTOWE, IAN.—" The Utility of the Psychiatric Out-patient Clinic," *Journ. Ment. Sci.*, April, 1931, lxxvii, p. 311.

Idem and LOCKWOOD, MADELINE, R.—" The Fate of 150 Psychiatric Out-patients," *ibid.*, July, 1935, lxxxi, pp. 502–508.

Sodium Amytal Narcosis:

BLECKWENN, W. J.—" Production of Sleep and Rest in Psychotic Cases " (Wisconsin Psychiatric Institute, University of Wisconsin, Madison), *Arch. Neurol. and Psychiat.*, August, 1930, xxiv, p. 365.

Idem.—" Narcosis as Therapy in Neuropsychiatric Conditions," *Journ. Amer. Med. Assoc.*, October 18, 1930, xcv, p. 1168.

BOHN, R. W.—" Narcosis as Therapeutic Aid in Psychiatry," *Psychiat. Quart.* April, 1932, vi, p. 301.

BRODER, SAMUEL.—" Sleep Induced by Sodium Amytal," *Amer. Journ. Psychiat.*, July, 1936, xciii, p. 57.

" Intravenous Administration of Sodium Amytal in Acute Psychotic Episodes," *Med. Bull. Vet. Adm.*, January, 1935, ix, p. 371.

MURRAY, V. F., and BURNS, MAUDIE M.—" Use of Sodium Amytal in the Treatment of the Psychoses," *Psychiat. Quart.*, 1932, vi, p. 273.

SMITH, P. S., and SCHWARTZ, D. K.—" Sodium Amytal as a Means of Obtaining Contact in Stuporous and Uncommunicative Cases," *ibid.*, October, 1934, viii, p. 748.

TITLEY, W. B.—" Pre-psychotic Personality of Patients with Involutional Melancholia," *Arch. Neur. and Psychiat.*, 1937, xxxvi, p. 19.

WOOTTON, L. H., ARMSTRONG, R. W., and LILLEY, DOROTHY.—" An Investigation into the After-histories of Discharged Mental Patients," *Journ. Ment. Sci.*, 1935, lxxxi, p. 168.

ZOLLER, E.—" Zur Erblichkeitsforschung bei Dementia Præcox," *Zeitschr. f. d. ges. Neur. u. Psychiat.*, 1920, lv, p. 275.

https://doi.org/10.1192/bjp.84.353.893 Published online by Cambridge University Press