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THE PSYCHODYNAMICS *of* ABNORMAL BEHAVIOR

BY

J. F. BROWN, PH. D.

Professor of Psychology, The University of Kansas;
Chief Psychologist, The Menninger Clinic

WITH THE COLLABORATION OF

KARL A. MENNINGER, M. D.

Chief-of-Staff, The Menninger Clinic,
on Part IV (Psychiatry)

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XIV

To

GRACE BROWN

PREFACE

In the brief period of a half century psychopathology, the study of isolated symptoms collected into a sort of curiosity cabinet labeled "The Morbid and Abnormal," has changed into psychodynamics, the study of the integration and disintegration of the human personality. From the few incomplete descriptions of bizarre behavior which characterized the earlier writings on the subject, we have arrived today at the beginnings of a systematized dynamic science. To be sure we are only at the beginning, but I believe that the time has come to incorporate these systematic aspects in the textbook literature.

It is one of the chief shortcomings of textbooks that they are seldom abreast of the times. I have tried to make this one up to date by adopting the organismic solution to the psychosomatic problem and by treating each behavior disorder systematically in terms of its cause, significance, and economy. So far as I know, no such treatment exists in the textbook literature. By taking the organismic viewpoint of the mind-body problem as a starting point, much space can be saved, which previously would have been spent in debating the organic versus the functional viewpoint. As a slogan for the organismic position we may adopt the following: "Every sample of human behavior, normal or abnormal, presents both a physiological (or organic medical) and a psychological (or psychiatric) problem." The evidence for this viewpoint will be given through this work. From this viewpoint the problems of psychologist versus psychiatrist, functionalist versus organicist, hereditarian versus environmentalist, will be seen to be meaningless. This viewpoint, furthermore, allows us better to clarify the relationship between psychology and psychiatry. I think we can foresee the time when psychology will occupy as respected a role in the medical and premedical curricula as does physiology today. The psychopathologist will be the research scholar, the psychiatrist the practicing physician. The organismic position is, further, basic to the new science of experimental psychopathology, where psychologist and psychiatrist may come together for really fruitful cooperation.

Today we see the symptoms of the disordered mind, as well as the productions of the normal mind, as having a definite *cause*, and a *significance* or *meaning*, and as playing an *economic* role. The one individual more than any other responsible for this systematic dynamic position in psychology is Sigmund Freud. I consider neither apology nor explanation necessary for organizing my presentation around psychoanalytic principles. While text after text by academic psychologists has appeared either ignoring Freud or distorting his viewpoints by giving a completely inadequate presentation of them, psychoanalysis has grown until it represents the most completely systematized school of psychology. Psychoanalytic theory deals with *psychological problems;* it deals with *nearly all* psychological problems, and the problems basic to it are *vital.* I believe that in many details the psychoanalytic theory stands in need of methodological correction and that experimental psychology may soon be in a position to furnish this correction.

The structure of the book falls into five independent but closely related parts. A brief introductory section, "The Organismic Viewpoint," establishes the methodological basis of the book. This I believe eminently worth while for the student, because so much confusion still exists with regard to the psychosomatic problem. Clarification of this problem will help us to see just what role psychology plays in modern medicine and is likely to play in the medicine of the future.

The section that follows "Symptomatology," is much briefer and perhaps more incomplete than in most treatises on this subject. The reason for this is that modern psychopathology is concerned with the symptom only as an index of a sick personality, just as modern medicine in general is concerned with the sick organism rather than the sick organ. Although there has been some improvement in the treatment of symptomatology in some modern texts, many remain not much more than symptom catalogues, and all too often these catalogues are arranged on no logical basis.

The third section, "Theory of the Structure and Genesis of the Personality," attempts a presentation of contemporary psychoanalytic theory which should be adequate for the beginning student. Furthermore, it attempts to present the theory in all its aspects and with all its implications. This, I believe, is a real innovation in a text written by an academic psychologist. If the student really understands this section, he will have a framework on which to hang the various facts about behavior disorders which are presented in

the ensuing section on "Psychiatry." I believe modern methodological research has shown that even a false theory is better than no theory at all. Today it is quite obvious that the psychoanalytic theory is far from being completely false, and, even if parts of it should later prove false, it will still remain of the greatest coordinating value. It has been my experience as a teacher that the complex field of descriptive psychiatry can be mastered only on some sort of theoretical schema, and that of psychoanalysis is by far the most systematic and scientific. In order to save myself from accusations of undue bias, I have dealt with certain rival theories also.

Whether academic psychologists or psychiatrists, writers on psychopathology have traditionally dealt with the problems of descriptive psychiatry. This leads to some questions concerning the boundaries of these two fields and their interrelationships. The author sincerely supports the proposition that only writers with medical training are completely competent to deal with problems of clinical practice. Although Part IV, "Psychiatry," is by no means intended to be a didactic manual, it is almost impossible to develop descriptive psychiatry without repeated reference to problems of etiology, differential diagnosis, and therapy. Even problems of internal medicine arise at points. For these reasons I was glad to avail myself of Dr. Karl Menninger's offer to edit this part of the book. Dr. Menninger eliminated some errors of fact and many infelicities of expression in the first draft of the manuscript and I am glad to acknowledge him as collaborator on this section.

The addition of the last chapter, on experimental psychopathology, is also an innovation. Herein I have attempted to sketch the first findings and many of the problems of this young science. It is my belief that experimental psychology is finally in a position to handle some of the basic problems of motivation and personality structure and so establish psychopathology on an experimental basis.

In order to make room for so much theoretical and methodological material, many things included in the typical text on abnormal psychology have had to be omitted. Neither the catalogue of symptoms nor that of syndromes attempts to be inclusive. I have rather singled out examples of each to illustrate methodological and theoretical points. The bibliographical notes appended to the various chapters give at least reference to the topics omitted and to more systematic presentations of descriptive symptomatology and psychiatry.

Similarly, I have been forced to keep material illustrative of the symptoms at a minimum. The teacher who has had some clinical experience (and I believe only such teachers should offer courses in this subject) can readily give other examples. Descriptions of isolated symptoms without dynamic interpretation, even such as are given in long protocols of verbal associations, more and more belong to a past era in psychopathology. Furthermore, I have not attempted to give "case histories" as these are ordinarily understood. As with the simple symptoms, case histories of syndromes without dynamic interpretation, however amusing they may be to the student, do not further his knowledge of psychodynamics. To give case histories with complete dynamic interpretations would require more space than was available. I have tried to compensate for this omission by referring to extended case histories in the bibliographical notes. Here again teachers with clinical experience may supplement the text with actual cases. Since no possible amount of study of case histories can replace actual clinical investigation of cases, such illustrative material as is given is for the purpose of elucidating the theory of psychopathology rather than for the purpose of teaching clinical psychiatry. For this reason I have allowed myself considerable leeway in omitting irrelevant detail in the illustrative material and in all cases enough freedom in the reporting of facts that the identity of the person is completely disguised.

Simply because of lack of space, I have not dealt with various borderline phenomena which may not at present be systematically integrated into the field of psychopathology. The older texts used as padding much such material which was fascinating to the student but of no systematic value. In this category fall spiritualism, telepathy, clairvoyance, and the other parapsychological phenomena, long descriptions of multiple personalities, *idiots savants* and individuals with absolute time and direction sense, extended treatments of sleep, hypnosis, suggestion, and the like.

The book is intended for students of psychology and premedical and medical students. It is based on notes for lectures, and its purpose is hence primarily didactic. I have not hesitated to repeat in various contexts certain of the basic principles, and in many places I have had to resume certain previous arguments to make the main outline of the story clear. This sacrifice of elegance is, I believe, necessitated by sound pedagogical principles. I have also

attempted to present the material in such a way that the practicing physician who had his training before the advent of modern psychopathology might find it valuable. I hope the book will be read even by some established psychiatrists and help a little toward the development of the organismic viewpoint in medicine, and so add to the growing cooperation of psychiatrists, psychologists, and internists.

Many individuals, teachers, colleagues, and students have contributed either directly or indirectly to the writing of this book. I am particularly indebted to Drs. Karl and William Menninger and the staff of the Menninger Clinic for allowing me every possible freedom in my research work. Through their cooperation I have been able to gain some firsthand knowledge of modern psychiatry in action and to make the acquaintance of many exceptional individuals. Any nearness to life which the book may possess comes from these relationships. A year's leave of absence from the University of Kansas in 1938 and 1939 enabled me to undergo a didactic psychoanalysis with Dr. Franz Alexander of the Chicago Institute for Psychoanalysis. This experience showed me how close "normal" behavior mechanisms are to those of many of the "cases" presented in this book. I am also grateful to Dr. Alexander and the staff of his institute for the excellent seminars and lectures on psychoanalytic theory which I was able to attend. Professors R. H. Wheeler, Beulah Morrison, Fletcher McCord, and Byron Sarvis of the Department of Psychology of the University of Kansas were all helpful in discussing the course of lectures on which this book is based. My former students, Dr. Walter Varvel and Dr. Albert C. Voth, gave helpful suggestions for the preparation of sections of the text. I am indebted to my assistants, Mr. John Endacott and Mr. Jerome Schiffer, for help with the bibliography, indices, and proof. Mrs. Alice Endacott made the drawings for the figures and helped type the manuscript. The original manuscript was prepared by Miss Peggy Wadhams. Finally I must express the indebtedness I feel toward many individual undergraduate and graduate students who through critical questions in the classroom have constantly trained and disciplined my expository powers.

J. F. BROWN.

PSYCHOLOGY LABORATORY,
LAWRENCE, KAN.,
October, 1940.

CONTENTS

PAGE

PREFACE vii

PART I

THE ORGANISMIC VIEWPOINT

CHAPTER

I. NORMALITY, ABNORMALITY, PERSONALITY 3

1. The Scope of Modern Psychopathology. 2. The Concept of Abnormality. 3. The Concept of Personality. 4. The Sources of Personality. 5. Summary.

II. THE HISTORICAL DEVELOPMENT OF PSYCHOPATHOLOGY 23

A. The Establishment of the Somatogenic Viewpoint. 1. Primitive and Precivilized Ideas. 2. The Ancient Civilizations. 3. The Middle Ages. 4. Some Early Skeptics and Humanitarians. 5. The Somatogenic Era. *B*. The Establishment of the Psychogenic Viewpoint. 1. The Development of a Scientific Theory of Hypnosis. 2. The Establishment of the Concept of Hysteria. 3. The Relationship between Hypnosis and Hysteria. 4. The Concomitant Development of Medicine. 5. Summary.

III. THE PSYCHOSOMATIC PROBLEM 48

1. Philosophical Aspects of the Problem. 2. The Somatogenic Solution. 3. The Psychogenic Solution. 4. The Organismic Solution. 5. Illustrations of the Organismic Solution. 6. Medicine and Psychology. 7. Summary.

PART II

SYMPTOMATOLOGY

IV. MODERN IDEAS REGARDING SYMPTOMS 71

1. Symptoms and Syndromes. 2. The Cause, Meaning, and Economy of Symptoms. 3. Phenotype versus Genotype. 4. Descriptive Symptomatology Established before Psychodynamic Theory. 5. The Terminology of Symptoms. 6. Summary.

V. ABNORMALITIES OF THE COGNITIVE PROCESSES (KNOWING) 84

1. Our Contemporary Views of the Relationship between Knowing and Doing and Feeling. 2. The Cognitive Processes. 3. Disorders of Sensation. 4. Disorders of Perception. 5. Disorders of Attention. 6. Disorders of Association. 7. Disorders of Memory. 8. Disorders of Thought. 9. An Actual Case in Way of Summary.

CHAPTER PAGE

VI. ABNORMALITIES OF THE MOTOR PROCESSES (DOING) 110

1. The Motor Processes. 2. Disorders of Muscular Activity. 3. Reflex Disorders. 4. Habit Disorders. 5. Disorders of Voluntary Acts. 6. Disorders of Total Behavior. 7. Return to Case in Way of Summary.

VII. ABNORMALITIES OF THE EMOTIONAL PROCESSES (FEELING) 123

1. The Emotional Processes. 2. Pleasantness and Unpleasantness. 3. Disorders of Mood. 4. Fear and Rage. 5. Love and Hate. 6. Return to Case in Way of Summary.

PART III

THE THEORY OF THE STRUCTURE AND GENESIS OF THE PERSONALITY

VIII. THE METHODOLOGICAL BASIS OF PSYCHODYNAMIC THEORY 139

1. Field Theory. 2. Points on Which All Modern Dynamic Theories Agree. 3. Interpersonal Relations and the Social Field. 4. Psychoanalytic Theory as a Type of Field Theory. 5. Summary.

IX. PSYCHOANALYSIS: BASIC POSTULATES; THEORY OF PERSONALITY. . 152

1. The History of Psychoanalysis. 2. Basic Postulates of Psychoanalysis. 3. The Structure of the Personality. 4. Mechanisms. 5. Summary.

PSYCHOANALYSIS: THEORY OF PSYCHOSEXUAL GENESIS. . . . 178

1. Evidence for the Psychoanalytic Theory. 2. Why the "Normal" Adult Finds Psychoanalysis Hard to Accept. 3. The Oral Stage. 4. The Anal Stage. 5. The Phallic Stage. 6. The Latency Period. 7. The Genital Stage. 8. Summary: Résumé of the Developmental Process.

XI. PSYCHOANALYSIS: THE CONDITIONING OF NORMAL BEHAVIOR . . . 209

1. The Effect of Infantile Sexuality on the "Normal" Adult Personality. 2. Normal Behavior and Character Traits Derived from Oral Sexuality. 3. Normal Behavior and Character Traits Derived from Anal Sexuality. 4. The Genital Stages. 5. The Theory of Dreams. 6. Psychopathology of Everyday Life.

XII. PSYCHOANALYSIS: SUMMARY; CRITICISM. 238

1. Summary of the Psychoanalytic Theory. 2. Criticism of Psychoanalysis. 3. Other Psychoanalytic Literature Outside the Scope of This Work.

XIII. OTHER THEORETICAL APPROACHES. 257

1. The Scope of This Chapter. 2. Psychodynamic Schools Deviating from the Freudian. 3. The Characterological Approach. 4. The Sociological and Ethnological Approach. 5. Endocrinological and Biochemical Approaches. 5. Summary.

PART IV

PSYCHIATRY

CHAPTER PAGE

XIV. PSYCHIATRY AS A BRANCH OF MEDICINE 271

1. The Psychiatrist and His Training. 2. The Extent of Psychiatric Problems in the Modern World. 3. Nosology and Diagnosis. 4. Psychoanalysis. 5. Other Forms of Psychotherapy. 6. Reeducation: The Aim of All Psychotherapy. 7. Summary.

XV. THE PSYCHOSES PRIMARILY ORGANIC IN ORIGIN. 300

1. The Concept Psychosis. 2. The Organic Factor in Psychosis. 3. Paresis. 4. Other Psychoses of a Primarily Organic Etiology.

XVI. THE PSYCHOSES PRIMARILY FUNCTIONAL IN ORIGIN 316

1. The Extent of the Problem of Functional Psychoses. 2. The Schizophrenias. 3. The Manic-depressive Psychosis. 4. Paranoia. 5. Other Psychoses Primarily Functional in Nature.

XVII. THE BORDERLINE DISEASES. 337

1. The Scope of This Chapter. 2. Hypophrenia. 3. Senile Psychoses. 4. Epilepsy. 5. Pathoneuroses and Organ Neuroses.

XVIII. THE PSYCHONEUROSES. 351

1. The Differentiae of Psychoneurosis. 2. The Scope of Psychoneurotic Behavior. 3. The Nosology of the Psychoneuroses. 4. The Obsessional Neurosis. 5. The Compulsion Neurosis. 6. The Anxiety Neurosis, Neurasthenia. 7. Anxiety Hysteria, Phobias. 8. Conversion Hysteria.

XIX. ABNORMALITIES OF SEXUAL BEHAVIOR 369

1. The Relationship between Perverse Sexual Behavior and Mental Disease. 2. What Constitutes Perversion in Sexual Behavior. 3. The A- and Hyper-functions of Sexuality. 4. The Para Functions of Sexuality.

XX. CHARACTER DISORDERS. 384

1. The Scope of the Problem of Character Disorders. 2. The Psychoanalytic Theory of Character Disorder. 3. Character Disorders Related to Infantile Sexual Fixation. 4. Character Defects Related to Psychosis and Psychoneurosis. 5. Character Disorders Related to Perversion. 6. Alcohol Addiction. 7. Criminality.

XXI. GENIUS 404

1. Swing and the Id. 2. Psychoanalytic Theory of Genius. 3. The Genius and the Neurotic. 4. The Product of the Artist: Psychodynamic Aspects of Form and Content. 5. The Audience. 6. The Motivation of Science and Philosophy.

PART V

THE FUTURE OF PSYCHODYNAMIC THEORY

CHAPTER PAGE

XXII. TOWARD AN EXPERIMENTAL PSYCHOPATHOLOGY 427

1. The Present Status of Psychodynamics. 2. Prerequisites to Experimental Psychopathology. 3. The Recording of Bodily Changes in Emotion. 4. The Standard Tests. 5. Comparative Psychopathology. 6. The Topological Approach. 7. Other Approaches. 8. The Future Outlook for Psychodynamic Theory.

BIBLIOGRAPHY 453

AUTHOR INDEX 471

SUBJECT INDEX 477

PART I

THE ORGANISMIC VIEWPOINT

CHAPTER I

NORMALITY, ABNORMALITY, PERSONALITY

1. The Scope of Modern Psychopathology

Consider these facts: Schizophrenia is a major social problem of our times. It is very likely that every reader of this book has watched at least one of his school or college classmates become nervous and "queer" and has subsequently heard that this individual has suffered a "nervous breakdown" and has been sent to the "asylum." In many cases no more has been heard from him. The chances are that this individual has developed schizophrenia. Schizophrenia will be dealt with in all its aspects in the course of this book. For the present it will suffice to point out that more hospital beds are occupied by individuals suffering from schizophrenia than by persons suffering from tuberculosis and cancer combined. In the United States over 15,000 new cases of schizophrenia enter the state-supported hospitals each year and these by no means include all the cases in the population. Furthermore, these are mostly people in the first flush of youth. And schizophrenia is not a disease like mumps or chicken pox or even tuberculosis, having a relatively short and definite course. Schizophrenics are among the youngest admitted to the hospitals and have an average hospital life of over sixteen years.

If schizophrenia is the most frequent of the major mental disorders, it is by no means the only one. Others range from diseases where the symptoms are quite obviously mental to those which the layman would not consider mental at all. A well-known practicing physician estimates that the "cause" of 60 per cent of the apparently physical disorders which he sees is "psychological." Other practicing physicians would undoubtedly consider this estimate too high, but every alert practicing physician today realizes the role of psychological factors in disease. Thus we can definitely state that, besides the cases of mental disorder which are quite obviously within the province of the psychiatrist, a great many cases of apparent physical disease have important psychological aspects. But modern psycho-

pathology is by no means limited to the study of "psychotics" or the severely insane, as the term "mental disease" usually implies. Rather it is concerned with the whole field of personality and behavior disorders. In recent times the problems of criminal behavior, sexual perversion, alcoholic and narcotic addiction, and even genius have become realized to be problems for psychopathology. Modern psychopathology deals with at least six main types of personality structure. These are the psychotic, the psychoneurotic, the sexually perverse, the disordered character, the genius, and the normal. Precise definition of these types will be given in the course of this book. Since we shall have to use these concepts for illustrative purposes before such precise definition is possible we may characterize them provisionally as follows. The *psychotic* is the individual who is so ill mentally that he is no longer sufficiently adjusted to reality to continue active in his social environment. These are the individuals who are legally "insane." The *neurotic* (or psychoneurotic, the words being used interchangeably) is mentally ill but not nearly so seriously as is the psychotic. The *sexually perverse* individual is one who gains sexual satisfaction only by perverse means or with love objects other than an adult member of the opposite sex. He is popularly looked on as a degenerate or sinner. The *characterologically disordered* individual shows no "mental" illness in the ordinary meaning of the term but has behavioral difficulties (criminality, alcoholism, etc.) which lead him to be considered antisocial or degenerate or "ornery." The *genius* is the individual who, motivated by psychological conflicts, produces works of art or science of social value.

The time has come in contemporary medicine where the practitioner should know as much about psychology and psychiatry as he does about physiology and pathology. Unfortunately, such practicing physicians are few. Works like those of Dr. Franz Alexander (1936),[1] Dr. Karl Menninger (1938), and Dr. Flanders Dunbar (1935) show us in detail how modern medicine has discovered that every behavior, whether we consider the behavior of a sick individual or of a well individual, offers problems to the physiologist and to the psychologist. It is no exaggeration to say that at least half of the

[1] The works of authors mentioned in the text are listed in alphabetical order in the appended bibliography (p. 453). In those cases where several works of a single author are listed the appropriate item is indicated by title or by the date of publication in parenthesis.

medicine of the future will be psychological medicine practiced by medical psychologists. The last quarter century has witnessed the most striking advance throughout the field of internal medicine. Many of the physical diseases previously fatal are today treated in a specific fashion. The average duration of the human life has increased about eleven years in the last quarter century. And in the last quarter century the increased life expectancy brought about by better methods of physical hygiene has occurred at a time when the psychological stresses of war, depression, and economic uncertainty have probably made psychological adjustment more difficult.[1] All this makes it most probable that in the future the importance of psychological medicine will outweigh that of physical medicine. These facts should show how important psychology is for the practicing physician.

But modern psychopathology is of great importance to the layman too. About 470,000 Americans are confined in hospitals for the care of the insane and in every year 150,000 new patients are admitted. These figures do not include the many individuals in small private sanitaria or under the care of individual physicians. The many mild cases which never come under a physician's care at all are also unrepresented. Although it is hard to get reliable statistics on this problem, it has been estimated that 5 out of every 100 American citizens will at some time or other be confined in a state hospital because of mental illness, and, since many individuals who should be hospitalized are not, it is conservatively estimated that an additional 5 out of every 100 are at some time incapacitated although not hospitalized because of mental disease. Thus 10 per cent of the population at one time or another suffer from the severer types of mental disease. Just as the common cold, which does not require hospitalization, is more frequent than pneumonia, which does, the greater number of mental diseases are not so severe that they require hospitalization. President Angell of Yale estimated that about 15 per cent of the American college undergraduate body at any given time are in need of the services of the mental hygienist. If at any given time 15 per cent are in need of care, one could fairly accurately estimate that at some time nearly the whole population is at least in

[1] The number of institutionalized patients has risen with extreme rapidity in the last quarter century. Whether or not this represents a real increase in the more severe types of mental illness is not certain. We shall discuss this problem in detail in Part IV.

need of advice. From the author's experiences as a teacher in American universities, he believes that it is almost impossible for any individual to go through four years of the intensely competitive situation of the college campus without at one time or another developing some slight mental abnormality. Consequently, abnormal psychology is of importance to all of us. Thus its study has become recognized to be of the greatest value in studying the so-called "normal personality." We shall emphasize this throughout this book.[1]

Through recorded history until the middle of the nineteenth century, mental abnormality was considered uncommon and terrible. (At times, as we shall see, the mentally abnormal were also looked on as particularly "inspired" or "chosen" individuals.) Mental abnormality meant "losing one's mind." It was usually considered so terrible a misfortune that one hesitated to speak about it. Today we realize that mental abnormality is neither uncommon nor necessarily terrible. Some of the milder and more frequent forms are today much more amenable to treatment than many physical ailments and, as with physical ailments, are today recognized as exaggerations or perversions of normal processes. (The chief tenet of modern psychopathology is that *abnormal psychological phenomena are simply exaggerations* (*i.e., overdevelopments or underdevelopments*), *or disguised* (*i.e., perverted*) *developments of the normal psychological phenomena.* This viewpoint is undoubtedly the most important single contribution of modern psychology to our knowledge of the human being.) Before we point out the reasons for its importance and the reasons for which we hold it, we must review briefly the old conception of abnormality and point out why this old view was held for so many centuries.

2. The Concept of Abnormality

Until recent times everyone considered mental abnormality uncommon and terrible. This is the case even today with many laymen. When it was not considered terrible, it was often con-

[1] The statistics given through this section are based primarily on Bureau of Census Report, issued by the Department of Commerce in January, 1938, and on Landis and Page's "Modern Society and Mental Disease." In Part IV we shall return to the problem of incidence of mental abnormality in some detail. At present we simply wish to emphasize the magnitude of the problem.

sidered comic or amusing. One has only to think of the stage presentation of the lunatic. If a member of one's immediate family "loses his mind," it becomes a great and unspeakable tragedy. If it is someone not so near and dear who becomes "crazy," "nuts," or "haywire," it may be considered screamingly funny. Until very recently the insane, the mentally deficient, and the criminal were considered to form a special group *below* the normal group, just as the particularly gifted were considered to form a special group *above* the normal group. The laws governing the behavior of the insane and

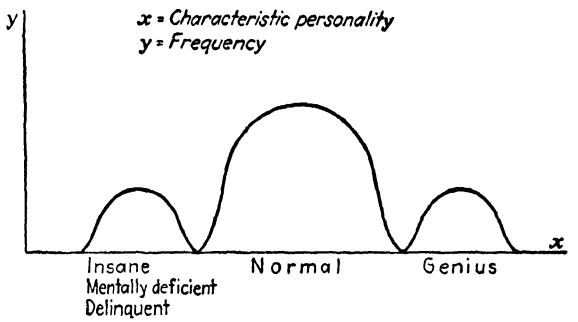


FIG. 1.—Showing the distribution of personalities as popularly considered.

delinquent, as well as those governing the behavior of genius, were considered special laws. The mechanisms underlying the delusions of the insane and the creations of the genius were not the same as the mechanisms governing the behavior of "the rest of us." The distribution of human personality, popularly considered, is that given in Fig. 1. Even today in popular thinking there are three distinct "types" of humans, the unfortunate insane and delinquent, the geniuses, and the normals who make up the "rest of us." Furthermore, in popular thinking there is no continuity between these groupings and no borderline cases. An individual is either definitely "normal" or definitely a "genius" or definitely "insane." While normal behavior was the result of normal causes, the process of becoming insane or becoming a genius was considered the result of special causes. Those driven insane were being avenged by God for their sins or were suffering through heredity for the sins of their forefathers. Those who became geniuses were the recipients of divine inspiration. This viewpoint, which in one form or another was universal, was held until about one hundred years ago even by men of science, and among laymen is still widespread. The author

seldom meets for the first time a group of psychology students where there is not at least one individual who considers all the insane syphilitic, or at least one who considers insanity due to masturbation. Similarly, the genius is understood only as the specially chosen or specially gifted.

There are three reasons why such a viewpoint remains so widespread. In the first place, until about one hundred years ago it was the prevalent theory held among even learned men. We must remember that modern science goes back only about four hundred years, and we must remember also that, before science, natural events which were difficult to explain were accounted for on theological grounds. Before we could have a modern psychology, we had to have a modern physics, chemistry, biology, and physiology. The reasons for this will become clear in the next chapter.

In the second place, and this followed from the prevalent theology, there was a decided social stigma in connection with insanity. Insanity was considered possession by the devil or the result of sinning, and even in enlightened circles, where medieval theology had been replaced by modern biology, it was believed to be due to faulty heredity. Consequently, the first discoveries in modern genetics simply pushed the responsibility from the individual as the sinner a little further back onto his sinning ancestry.

In the third place, personality was looked on as constant, bestowed by God or (again, in more advanced circles) by personal heredity. Every individual likes to believe that he has an ego or self, his inner picture of his personality, which remains constant and does not change with the vicissitudes of life, unless, perhaps, he loses it completely. From this arises the popular characterizations of insanity as "losing the mind," "being out of one's self," and the like. The theological belief that man was created in God's image and placed on a world which is the center of things is one which is very flattering and consequently very hard for most of us to give up. The reader has certainly heard something about the great difficulty with which the Copernican astronomy, which rightfully insisted that the sun was the center of the solar system, was established over the Ptolemaic, in which all things revolved about the earth. It is psychologically much easier to give up belief in the earth as the center of things than in personality as a constant, unchangeable, God-given entity. In a few paragraphs we shall develop a modern and very different concept of personality. The popular view, that both the insane and

the genius are completely distinct from the normal, must be abandoned for the viewpoint of modern psychology, which sees personality traits as distributed on a continuum. To repeat from above: Abnormal psychological phenomena are simply exaggerations (*i.e.*, overdevelopments or underdevelopments) or disguised (*i.e.*, perverted) developments of the normal psychological phenomena. This viewpoint has several important methodological implications.

In the first place, it overcomes the trichotomy, abnormal, normal, genius. The electricity produced in the laboratory is of the same nature as that produced in the electrical storm. The one law of falling bodies covers such different phenomena as free fall, movement down an inclined plane, the flight of birds, and the movement of the heavenly bodies. The firecracker and the bomb, the electric lamp and the sun obey the same physical laws. Similarly, the productions of the genius, the ravings of the lunatic, and the sentence which you are now reading are produced by mechanisms which vary in degree and not in kind. What we previously considered abnormal, that is, away from the normal and different from the normal, represent simply exaggerations or disguised developments of normal thinking, feeling, willing, and acting.

In the second place, we consider that these abnormal mental phenomena have natural causes and obey the same laws as do the normal mental phenomena. Thus abnormal mental phenomena are not caused by supernatural forces like "punishment by God," or "possession by the devil" or, on the other hand, by "spiritual inspiration" but by ordinary psychological laws. Thus they have a significance or meaning. We believe that just as his logical and coherent thinking has a significance or meaning to the normal individual, so do his "ravings" to the insane individual. Actually through modern psychopathology we can decipher what this significance is when we have considerable knowledge of the individual's past life history and present life situation. Similarly the productions of the genius have a meaning in connection with his life history.

In the third place, we believe that just as normal thinking and willing and doing leads to economical or adaptive results, so does that of the mentally ill if we consider the life history and the present situation.

Thus abnormal phenomena differ from the normal in degree and not in kind. They are caused by the same sort of mechanisms, they have in the biological sense a definite significance or meaning, and

with regard to the total life situation they are economical. How each behavior disorder may be considered as having a cause, a significance, and an economy can only be demonstrated in the course of the book. The modern idea of the continuity between the abnormal, the normal, and the genius is given in Fig. 2, which should be compared with Fig. 1.

We have already stated that this modern theoretical viewpoint is of the greatest importance. There are three reasons for its importance, one *theoretical*, one *practical*, and one *cultural*. From the standpoint of *psychological theory*, if it is true that abnormal mental

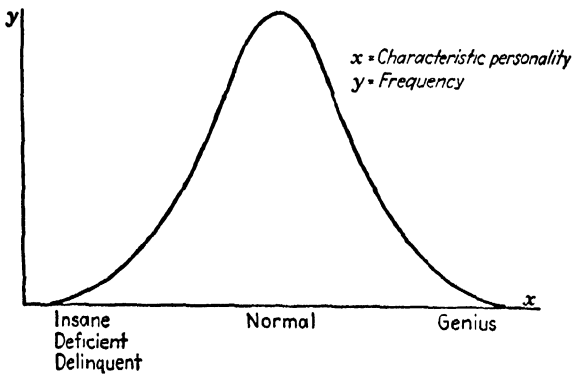


FIG. 2.—Showing the scientific view of the distribution of personalities.

phenomena are simple exaggerations or perversions of the normal phenomena, we can draw conclusions concerning the normal behavior from the abnormal and concerning abnormality from the normal. Consequently, we may experiment with abnormal subjects and learn something about normality and from experiments on normal subjects learn something about abnormality. For purposes of experimentation, this is of greatest importance, because in some cases the exaggeration or perversion of normal phenomena shown by the abnormal are much easier to study than the less extreme processes of the normal individual. For other problems the inverse of this is true. Consequently, abnormal psychology may no longer be presented as a domain apart from the normal.

The second reason is *practical*. If abnormality differs from normality in degree rather than in kind, when we understand how this degree difference is brought about the possibility arises of reversing the process. For many cases we can already do this. Not only may

we hope to bring many abnormals back to normal, but we may also hope to force an increasing number of normals into the realm previously thought of as that of genius. Until very recently the person who had "lost his mind" was usually considered as lost forever. At the present time many so-called "insanities" are curable, so that the individual returns to a completely normal life, and others who are not yet curable are subject to what we call "social recovery." By social recovery is meant that the individual may come back and take some place in society, although it very often is not the one which he previously held.

The third reason is *cultural*. This viewpoint removes both insanity and genius from the realm of the mystic. If it is possible to speak of human progress at all, progress must be defined in terms of the increase in man's scientific and rational control over nature. The whole history of man's progress has been the history of his slow and not always direct approach to rationalism regarding his place in nature. Although it is very difficult to give up the romance which accrues to mystic explanations, the gains which are to be had from viewing the human personality in both its normal and its abnormal phases from a rational viewpoint fully outweigh the consolations of a romantic mysticism.

We have now given the reasons why this modern viewpoint about abnormality is so important, but we have not yet given the reasons why we believe it. These may be given in final form only in the course of the book. It will be worth while, however, to point out the nature of these reasons now. In the first place, we believe that personality traits are distributed along the curve of normal probability, as was indicated in Fig. 2, for both *theoretical* and *empirical* reasons. *Theoretically* such distribution is given when a great many different causal factors are combined according to the rules of chance. It would take us too far afield to go into probability theory and statistics in a text devoted to abnormal psychology. It can be shown on mathematical grounds that we should expect such a distribution of any personality trait caused by a large number of different causal factors.[1]

Of more immediate interest is our *empirical* reason for so believing. Whenever we measure the heights of a large group of individuals, or their weights, or their intelligence quotients, or their social attitudes,

[1] A simple introduction to the mathematics of the normal probability curve may be found in Garrett and a more stringent one in Guilford or Yule.

we find a very few who are low in the scale in question and a very few who are high on the scale in question, more who are rather low and rather high, and the greatest number tending toward the mean or toward mediocrity. Such a curve as that given in Fig. 2 is called the curve of normal probability. Its exact mathematical features may be found in any standard work on statistics. Although F. Allport (1939) has recently shown that the distribution of certain social attitudes, particularly those concerning conformity to social norms (which are undoubtedly important for psychopathology), do not invariably follow the shape of the normal probability curve, we never find dichotomous or trichotomous divisions for personality traits. For example, we do not find any break in the distribution of intelligence between the feeble-minded and the normals, nor between the normals and the geniuses. Similarly, with regard to physical or emotional factors, the extremes do not represent isolated groups but merge gradually into the middle range.

The older concept of the abnormal was taken to mean a special and distinctive group of phenomena which could be divided from the normal. Modern psychopathology theoretically can make no such division. However, for practical purposes we must still set up certain criteria to divide the insane from the sane, the feeble-minded from the normal, and the antisocial from the socially adjusted. Such a division has no theoretical psychological significance, but it is an important applied sociological distinction. As a problem it has considerable sociological, legal, and political significance. Such a problem, however, lies beyond the limits set for this book. At this point we are interested only in the theoretical psychological aspects of the problem.

3. The Concept of Personality

We must next contrast the popular (older) with the scientific (or newer) view regarding personality. The popular view holds personality to be a constant, unchangeable entity, given either by God or through the personal heredity. Personality thus is looked on first as a *quantitative* entity. Popularly we still speak of this person as having a great deal of personality and of someone else as having but little. In the modern theory of personality, such a distinction is quite meaningless. Personality is looked on as a *qualitative* rather than a *quantitative* concept. Black or white, rich or poor, stupid or brilliant, beautiful or ugly, every individual is considered to have a

personality which distinguishes him from other individuals. It is true that we speak of the structure of personality and the degree of its differentiation, but we do not refer to its amount. Personality is to be considered as a pattern or a configuration or a *Gestalt* rather than a magnitude. The pattern refers to the way which the individual personality traits hang together. In the second place, popular ideas on personality are inclined to be *evaluative.* X has a good, a pleasing, an admirable personality, whereas Y has a bad, displeasing, unadmirable one. To the scientist, of course, such evaluative concepts are not admissible. We are equally interested in the "good" and the "bad" personality. As a matter of fact, it is through study of the "bad" personality that we have learned so much about the "good." In the third place, rather than viewing the personality as *constant,* we know that aspects of the personality are continually changing. Anyone who has seen a well-adjusted individual develop a mental derangement has seen this very clearly. Personality changes when the child becomes adolescent, when the adolescent falls in love, through marriage and through the birth of children, through getting or losing religion, or through changing political faiths. We think of personality then as in a constant flux.

From the modern view personality is a qualitative concept, to be viewed without evaluation and considered as constantly changing. Personality is the pattern or arrangement of the personality traits in an individual. By traits we mean the quantitative variations between individuals which follow generally the normal probability curve. Included in the personality, then, are all the physical characteristics of the individual, all the various individual organs—heart, liver, lungs, genitalia—the individual's existing state of health, his stamina and constitution, his intellect, his emotions, his temperament. By personality, however, we mean not simply the sum total of all these traits but rather *the way in which they are combined to give the individual his individuality.* By the individuality of the person we mean that dynamic organization or configuration of traits which determines the individual's unique adjustments to his environment. It is easy to see that, since all the personality traits may be present in various amounts, an infinite variation in personality is possible. It is often said, although this is a statement which cannot be proved, that no two personalities are exactly alike. Since this is so, some scientists have even despaired of studying the personality and its genesis. However, although no two personalities may be exactly

alike, all human beings biologically belong to a species and, in society as it is now constituted, all human beings must meet very similar situations. It is this fact which has enabled a few medical men and psychologists to develop the systematized science of modern psychopathology, to which this book is devoted.

4. The Sources of Personality

The theological viewpoint was that the personality was the gift of God. This was a rather easy solution to the complex problem, but one by no means satisfactory to the scientist. In the nineteenth century, when modern biology was established, God was replaced by heredity. In more recent times environment has been stressed as of perhaps even greater importance than heredity. This has led to what is probably the most debated problem in modern biological science, namely, the problem of heredity versus environment in determining personality. The author has expressed his views on this problem in some detail in a previous book, *Psychology and the Social Order*. The following lines attempt to summarize his findings there.

It is true that some personality traits are established through the nature of the human germ plasm and are so to be looked on as hereditary. Many others are established during the lifetime of the individual. It was previously popular to list certain definite traits as due to heredity and certain other traits as due to environment. Modern research has shown that these two important factors may not be separated. There are no hereditary factors which may not be modified by environmental forces, and, similarly, environmental factors can only begin to work on the biologically hereditary organism. The problem of heredity versus environment has received considerable clarification by modern theorists of biology. We can no longer say "heredity versus environment," but must rather say "heredity in environment." We can no longer say "the individual versus his sociopsychological surroundings," but rather "the individual in and as a part of his sociopsychological surroundings." Consequently, modern biological research accepts as axiomatic: "No heredity without environment; no environment without heredity." No longer can we say that certain traits are due to heredity and certain traits to environment. Nor can we even say of any given trait that this trait is 70 per cent hereditary and 30 per cent environmental. A more satisfactory way of expressing the relationship at

the present time is by considering the amount of change in behavior which we can bring about by manipulation of the environment. From this viewpoint it is sensible to look on as definitely hereditary traits those which we have no power of changing during the individual's lifetime and as definitely environmental those which we can completely change. For no single trait have we the complete power of manipulation, nor is there any over which we have no power of manipulation. Consequently, it is best to speak not of hereditary and environmental traits, but of those relatively highly conditioned by heredity and those relatively highly conditioned by environment. In *Psychology and the Social Order* the author made a provisional list of the traits classified on such a basis. This list was as follows:

I. Characteristics of Humans Chiefly Determined by Heredity

A. Physique.—The physical characteristics of an individual (height, weight, hair, and eye color, as well as the general pattern of physical characteristics) are to be considered as relatively determined by heredity. Some of these are, of course, more subject to environmental control than others. The effects of climate and nutrition on height and weight are too well known to require elaboration. Hair and eye color on the other hand are fairly well established as Mendelian unit traits. Although humans give birth to monsters occasionally, these monsters are, to put it crudely, human monsters, not ape or cow monsters. The species then is completely determined by the germ plasm. But here again it is necessary to point out that no sure set of criteria for the demarcation of species has been established. And the recent work of H. J. Muller and his colleagues has shown that new species may be created by environmental controls. To be sure the species was created by radiation of the eggs of the lowly fruit fly (Drosophila), and the possibilities of similar human manipulation seem far away. But Galileo probably never realized that his discovery of the basic law of mechanics would have the applications we know today. Also the general characteristics or pattern of physique are chiefly determined by "heredity." Thus family resemblances are often so striking that an unknown individual is immediately recognized to be a Smith or a Jones. Thus for immediate practical purposes we may include physique in those factors chiefly determined by "heredity." But even here we must not lose track of the fact that height, weight, stamina, etc., are *modifiable* by *manipulatory* changes in the environmental field.

Physique is, to be sure, one of the most important combined traits in the make-up of the human personality. Lack of pulchritude in a female or lack of virility in a male may, in extreme cases, completely modify the personality. Dr. Alfred Adler (1917) has in fact attempted to build a whole theory of personality genesis on the idea of "inferiority complexes"

developed roughly on such a basis. The Adlerian theory of personality genesis attacks the problem in a somewhat superficial manner, but Adler has succeeded in pointing out that certain embryologically conditioned factors are of great importance in personality genesis.

B. Reaction Tendencies.—The properties just spoken of are chiefly structural aspects of the personality. In addition to these must be listed certain functional reaction tendencies which are also primarily determined through "heredity." F. Allport (1924) makes a rather specific list of these tendencies, which he calls without complete justification reflexes. We can best quote his conclusions concerning these:

> It is now possible to return with fuller understanding to the problem stated at the beginning of this chapter. Our aim was to give an account of the innate sources of behavior, and to show how the complexity of human activities is constructed upon these inborn foundations. A certain group of reflexes, either present at birth or involving a later ripening of receptors and effectors, were selected as the origins for which we were searching. These reflexes are classified as (1) the avoiding reactions, such as infantile withdrawing, rejecting, and struggling, and (2) the approach-responses to the stimulations of hunger and of the sensitive and erogenous zones. In the competition with other reflexes for the final common path, these reflexes are prepotent. They are of the highest importance for the welfare of both the individual and the species. And finally, they determine the subsequent acquisition of knowledge and skill by every human being. The intricacies of human conduct are modifications of these simple prepotent responses. [From F. H. Allport, *Social Psychology*, Houghton Mifflin Company, Boston, 1924, p. 79.]

Thus Allport classifies as prepotent all reaction tendencies which may be elicited at birth or which mature on a purely biological basis after birth. Here for the sake of completeness we ought to add all the non-voluntary reflexes and in general the reflexes under control of the automatic nervous system. Also we must consider certain voluntary reflexes, like eye movements, grasping, etc. To give a definite list of adequate stimuli for these reflexes would be a misleading procedure, because we know that almost immediately after birth there is learning (conditioning) which elicits these responses to other than the originally adequate stimuli. This conditioning process must be looked on as environmental. From certain of the researches of the psychoanalysts we also know that even the non-voluntary reflexes under the control of the automatic nervous system are subject to environmental manipulation. Thus recently the viewpoint has become widespread that also with regard to reaction tendencies no sure line may be drawn between the hereditary and the environmental. The best procedure is to attribute to heredity the reaction tendencies necessary to restore organic equilibrium at birth and to keep the organism alive. Consequently nutrition and growth are taken care of and such emotional reaction tendencies are present that the baby is able

to "communicate" his needs to the parents through "love," "fear," "rage" reactions. Such original reaction tendencies then are important in the resulting personality pattern of the adult and are to be looked on as relatively fixed in the embryological field. But they too are subjected from the very start to a certain manipulation by the environment. There is no life without the "hereditary" basis for life, but equally no life without what Henderson has called an environment of certain fitness.

We have spoken so far of motor responses. On the sensory side certain perception forms must be considered as laid down in the embryological field. Perception of form, color, movement, sound, heat, and the other "elements" of perception depend on the peculiar structure and function of the human nervous system. These perceptions, particularly those of outer reality, only arise in an environment, however, and that changes (manipulation) of the environment cause changes in the perceptions is so well known that it is banal to mention it.

We must add a word or two on motor and sensory limitations, which are quite obviously placed on the organism by the embryological field. Large portions of the physical environment are not perceived at all and differences within the environment are perceived only when differences of a definite amount exist in the physical stimuli. I refer here, of course, to the well-known absolute and difference thresholds for sensation and perception. Similarly, reaction times, fatigue-ability, hand-eye coordination depend on factors laid down in the period of gestation. Of course all of these are subject to certain and sometimes very great modification with practice.

II. Characteristics of Humans in Which Heredity and Environment Are Codeterminant

A. Intelligence.—We now turn to those personality traits which are decidedly conditioned by heredity but which are highly modifiable by environment. Chief of these is that constellation of traits which psychologists call intelligence. Psychologists have gradually changed from viewing intelligence as a class-determined concept to viewing it as a field-determined one. From the modern standpoint, intelligent behavior is behavior which arrives at goals. Until very recently psychologists and biologists always believed that this factor was almost completely determined in the germ plasm. The I. Q. (the intelligence quotient) as a measurement of these correlated traits was considered constant so that one accurate measurement would fix it. Recent researches have indicated quite clearly that very moderate changes in the psychological surrounding field will change the I. Q. by 15 to 20 per cent, and cases of fairly radical changes (through psychoanalytical treatment, for instance) up to 40 per cent. That is to say, subnormals with I. Q.'s around 85 have been brought up to normal, and even some morons, I. Q. = 60, have been made normal through specialized education. Doubtless many normals

have been raised equally by a favorable "environment" and certainly many a potential genius has retrogressed through unfavorable surrounding field conditions. The cases reported are usually of subnormal children from households rich enough to allow the employment of the services of specialists.

Thus if comparatively mild changes in the structure of the environmental field alter the I. Q. by amounts ranging upward to 40 per cent, it is almost certain that very radical changes would alter it even more. Consequently we may be making a fair estimate when we assign equal values to heredity and environment in determining intelligence. There are cases of course where the amentia is so severe that the impressions of the changed environment play no role in the psychological field of the child. Thus in fairness it must be recorded that certain forms of clinical amentia are still to be looked on as hereditary.

All these researches indicate the possibility of changing intelligence through planned manipulation of the environmental field. Those "unplanned manipulations" brought about by poverty, by unemployment, or, on the other side, by great wealth and a favorable environment must affect the I. Q. by like amounts. Early researches on the relative intelligence of different races and different social strata were all misinterpreted. We invariably find the economic or racial underdog averaging lower in intelligence than the racial and economic master. When intelligence was considered purely an hereditary matter, one concluded that these were differences beyond human control. More modern research has changed this viewpoint, so that the old slogan of the "poor are poor because they are dumb" must be changed to the "poor are dumb because they are poor."

B. Subtraits Included under the Concept Intelligence.—The tests used to measure the I. Q. are made up of a sample of various goal activities. Each of these is to be considered as partially determined by heredity and partially by environment. In actuality, of course, some of the factors such as reaction time are determined almost wholly by heredity. Others like school knowledge are determined almost wholly in the environmental field. Exactly what proportion is to be assigned to each of these fields cannot be known without experiment. The continuation of the work along this line is most important and should enable us to give a more precise answer to this question.

III. Characteristics Chiefly Determined in the Environment

A. Goals.—We come finally to the characteristics chiefly determined in the environment. These are most available to manipulation and at the same time are the factors of chief social-psychological importance. First we consider the goals of the individual. What an individual strives for is largely determined by environment. One may accept the "hereditary" determination of some sort of goal-directed activity. In other

The realization of one truly psychogenic disease spurred research on into the whole problem of psychogenic mental illness. Charcot himself came around to the new viewpoint and was a leader in the research. After he became convinced of the psychogenic viewpoint he performed very interesting experiments which definitely convinced many more members of the medical profession. It was gradually realized that there were many mental disorders, like multiple personality and morbid anxieties and fears, which on the surface looked very different from hysteria but which had the same sort of underlying dynamics.

Among leaders in the French school to continue this work were Bernheim and Liéubault and, perhaps most important, Pierre Janet (1859–), whose research did much to popularize the psychogenic theory. The French school as a whole, however, continued to use conceptions which were inclined to place an undue weight on constitutional liability and on traumata (emotional shocks) which occurred in adulthood. We realize today that constitution is important and that adult emotional experiences do precipitate mental abnormalities, but we believe today that the most important causes of mental abnormalities lie in unconscious experiences. This point the French school was never quite willing to accept, and the center of modern psychopathology hence moved to Germany at the end of the nineteenth century.

About 1900 it was clear that there were mental diseases with a psychogenic etiology as well as those with a somatogenic origin. Just how certain parts of the self became separated or dissociated so that one of these "hypnotized" the other remained vague, however, until the advent of Sigmund Freud (1856–1939).

Freud was a brilliant young Viennese physician who had first specialized in pharmacology and neurology but who, through his work with Breuer, had become interested in hysteria and went to Paris to study with Charcot. While studying there, he came to believe that the inner conflict most often underlying the hysteria was sexual in nature. Thus Freud set up the theory, which will concern us in the greatest detail later, that the conflict which caused one part of the self to hypnotize another part of the self and so develop hysterical symptoms was usually sexual in nature. Freud used sex in a very much broader sense than we are accustomed to think of it in common parlance. To Freud, as we shall see, the sexual urge was the motivating factor behind all intimate relationships. In

its very briefest outline form, Freud's theory was that certain sexual drives, being frustrated by society, are forgotten through being forced into the unconscious part of the personality. But they still remain active and try to get into consciousness. Part of the self prevents them from so doing. They are able, however, to disguise themselves and to return into consciousness as symptoms. Thus Freud completed our understanding of the interrelationship between hypnosis and hysteria toward the end of the nineteenth century. His predecessors had shown that such a relationship existed. Freud showed the how and the why of it. Interestingly enough, he gave a modern medical meaning to the speculations of Hippocrates, which we saw earlier in this chapter appear so ridiculous on first hearing of them.

Freud and his followers soon began to apply this basic formula to other problems of mental disorder. His particular mode of attack was called "psychoanalysis." After about thirty years psychoanalysis became recognized as the most scientific of various psychogenic schools. In the 1920's the debate between the somatogenic and the psychogenic schools reached its high point. The outcome of this debate will be the subject of the next chapter. What Freud really did was to show that medical psychology could proceed on the basis of psychological understanding, where the somatogenic school insisted on an organic understanding. Freud's work was more important than that of any one individual in showing that abnormal mental phenomena were simply exaggerations or perversions of the normal mental phenomena and that every symptom had a cause, a significance, and an economy. These two ideas of Freud are the chief cornerstones on which modern psychopathology rests. Consequently, as we go on, we shall have a great deal more to say about Freud and his theory.

4. The Concomitant Development of Medicine

Throughout this chapter we have talked chiefly about the development of psychological theories, shown how psychological factors were at first explained on magical or religious grounds, how later superstition was overcome by the establishment of the somatogenic viewpoint, and how more recently psychology has come into its own as a branch of medical science. A few words about the concomitant development of medicine in general may help clarify the argument.

If the psychological medicine of the ancients was magical, so was the organic medicine. Consequently, for early times it is not neces-

sary to differentiate between the history of medicine and that of psychiatry. The medical man who drove out the demons at the same time administered the organic medical therapeutic agencies. The relationship between the priest and the medical man is a close one in all primitive societies. This relationship has been studied in detail by many social anthropologists like Maddox and Radin. Even the most primitive societies, however, discovered, largely through trial and error, the therapeutic values of certain herbs and grubs. The first branch of medicine to develop was consequently pharmacological chemical therapy. Despite the many insights into other forms of medicine by Hippocrates and the Alexandrian school, no more than the beginnings even of chemical medicine were made until late in the Christian Era. The first real discoveries in medicine were applications of pharmacological therapeutics in the alimentary canal. Even until modern times all reputable medicine was chemical medicine. This was so because nothing of real importance concerning anatomy was known until the sixteenth century, nothing of importance concerning physiology until the seventeenth century, nothing of importance concerning microscopic life forms until the eighteenth century, or of bacteriology until the nineteenth century. The applications of physical science to medicine came gradually from the midwife and the barber, who originally, of course, did not have the prestige of the medical profession. It is interesting to point out that to a certain extent the tooth puller, who during this whole period was in the same category as the midwife and the barber, has not arrived to medical prestige even today. Only in the eighteenth and nineteenth centuries do we have physical medicine developed so that surgery and obstetrics become reputable medical disciplines. And only in the nineteenth century do we have the establishment of bacteriological medicine and immunology. Only at the present time do we have the establishment of psychological medicine. In most advanced medical circles today the importance of psychology is admitted. As Dr. Karl Menninger has written:

> The emphasis on *psychological* factors in disease (and in health) is slowly permeating the entire practice of medicine. No longer the exclusively *chemical* concepts of the Middle Ages and earlier, nor the chemico-*physical* concepts of the nineteenth century, but a concept of interacting physical *and* chemical *and* psychological factors begins, now, to characterize the theory and practice of medicine. Once it was considered ridiculous to record a temperature; later it was considered ridiculous to examine a

specimen of urine; and when these procedures became generally accepted it was still considered ridiculous to inquire into the details of a patient's dream. Now we know that dreams and urine and fever may and *must* all be examined if we are to truly and fully understand a patient. No intelligent or informed physician thinks any of these procedures absurd today—even though in practice he may omit one or several of them. For every thoughtful physician knows that psychological factors are as real and as effective as physical or chemical factors. [From K. Menninger, "Psychiatry and Medicine," *Bull. Menninger Clin.*, 1: 2, 1936.]

5. Summary

*A*1. The primitive mind accounted for all action and behavior by "spirits." Thus normal behavior was guided by the normal "spirit" and in abnormal behavior something (the demon) must have replaced this. Thus arose the theory of demon possession which in one form or another was used to account for abnormal human behavior until about 100 years ago.

*A*2. The ancient civilizations acquired some rudimentary scientific knowledge of human behavior, but this was lost in the Christian Era.

*A*3. Christian psychology based on Christian theology was only a sophisticated and modified form of the theory of demon (devil) possession.

*A*4. With the growth of modern science following the Renaissance and Reformation the validity of the devil-possession theory was questioned until it was gradually abandoned. A more humane treatment was accorded the psychologically abnormal and the Humanitarian Era established.

*A*5. In the nineteenth century superstition was finally replaced by the somatogenic viewpoint, which insisted that all psychopathology was due to brain pathology.

*B*1. Although the scientific validity of the somatogenic viewpoint is unquestionable, the psychological side of the problem remained uninvestigated. The study of hypnosis revealed that unconscious mental processes existed which affected conscious mental and physical processes.

*B*2. The disease hysteria was realized to be a sort of "self-hypnosis" and the psychogenic theory was established. The psychogenic theory believed certain mental abnormalities had their origin in experience, in such a way that it was unnecessary to postulate any brain pathology.

*B*3. From the studies of hypnosis and hysteria of the French school, Freud advanced to the position of psychoanalysis which gave us the first modern scientific theory of the nature of psychogenic illness.

*B*4. Medicine has gradually developed to the point where we today recognize that psychological factors are present in all diseases.

BIBLIOGRAPHICAL NOTE

There is no complete and authoritative history of psychiatry available. Much of the material on which this chapter is based may be found in the histories of psychology by Brett, Boring, and Murphy, and in the histories of medicine by Garrison and Gorton. Jelliffe's "Some Random Notes on the History of Psychiatry of the Middle Ages" are good. The psychiatry of the ancients is developed by Oliver, that of the Middle Ages by White. Zilboorg (1935) has made an excellent study on the precursors of modern psychiatry. Conklin's and Moss and Hunt's texts contain brief chapters on history. The development of the psychogenic school is handled in Janet (1925), Zweig, Winkler and Brom berg, and Freud in his *Autobiography* (1935) and in his *History of the Psychoanalytic Movement* (1938). A. Deutsch's *The Mentally Ill in America* is a complete history of American psychiatry in relation to its European background.

CHAPTER III

THE PSYCHOSOMATIC PROBLEM

1. Philosophical Aspects of the Problem

In the last chapter we traced the slow development of psychopathological theory. In this one we shall present in some detail our present ideas about the relationship between body and mind. The great Copernican discovery that the earth was not the center of the universe gave the impetus to modern physical science. The Darwinian hypothesis that man's body is animal and natural and a part of the biological continuum became the foundation for nineteenth century biology. The Freudian postulate that man's mind is conditioned by his body in certain definite ways may well be the integrating principle on which a scientific psychology is established. Its importance necessitates a somewhat detailed discussion of the body-mind problem.

In everyday, prescientific, undisciplined thinking all of us make a distinction between body and mind. No matter what philosophers tell us about the problem, and no matter what our considered solution of it is, we still think of the ego or self or soul or mind as directing, at least at times, the movements of our bodies. We still think that even if the body grows old and changes, we have a self or soul or personality that remains essentially the same. We think of a real difference existing on the one hand between the "I," the soul, the self, the mind—in brief, the psychological—and, on the other hand, the body, the physiological organism, the blood and muscle and bones—in brief, the physical. This distinction comes into most of our practical considerations, into our serious literature, even into our popular songs, like "I am yours, body and soul" and "Why not take all of me?" In brief, we are inclined to think of the psychological aspects of our person as being something distinct from our bodies, something immutable, and, if we are religious, something that endures.

Modern science and philosophy are both very critical of this viewpoint. From the last chapter we can see it as a remnant in

popular thinking of the once universally held Catholic theological dogma. The metaphysical shortcomings of the popular view of the body-mind problem have influenced innumerable philosophers, metaphysicians, and scientists to set up a better one in its place. The literature of the body-mind problem in philosophy is tremendous. By no means have we any ambition to cover it here. We must, however, speak briefly of some of the chief solutions of this body-mind problem and adopt that one which is methodologically most valid as a basis of our subsequent discussions; this is necessary because medical psychology must be concerned with this troublesome problem of the psychosomatic and psychophysical relationships.

In his excellent book on the problem, Professor C. D. Broad lists some seventeen proposed solutions with regard to the relationship between the body and mind. Of these he finds some ten impossible, some five unlikely, and two possible. We shall not attempt to review all of these, but we can at least point out why the popular viewpoint as we have presented it above is inadequate for science and why some of its alternatives are better starting places for the development of a medical psychology than are others. There are three chief ways of dealing with the body and mind problem: *dualism*, which may be divided into two types, *interactionism* and *parallelism; monism*, which may be divided into two types, *idealism* and *materialism;* and *neutralism.*

The dualistic solution accepts the reality of both mind and matter, spirit and body, psychological phenomena and physical phenomena. This is the doctrine of Christian theology, of course, which supposes that body may work on mind and mind may work on body. The whole problem of Christian ethics and morality is concerned with strengthening the control of the spirit or soul over the body and seeing that the soul remains pure and, consequently, a candidate for heaven. Let us give an example of interactionistic dualism as it still persists in our popular thinking: "It is a fine summer day. I feel good. I decide to go out for a walk. I feel hungry. I see an apple. I eat it. It is a green apple. I develop a belly-ache. I feel bad." In this brief sequence of events one popularly says: "It is summer. My body is in good shape and I feel good (body on mind). My fine feelings set my body in operation and I go for a walk (mind on body). I feel hungry because of the exercise (body on mind). I spy the apple and eat it (mind on body). I feel sick (body on mind)."

Now this type of explanation, while completely adequate for the needs of daily life, social intercourse, and popular parlance, is scientifically and philosophically quite inadequate. As a strict matter of fact, we can reverse the whole reasoning. "It is summer. The fine weather mentally perceived makes me feel good (mind on body). The muscular tonus leads to physiological tensions which make me decide to walk (body on mind). The pleasant perception of the apple initiates feelings of hunger and my salivary glands work (mind on body). The activity of my salivary glands leads to the decision to eat the apple (body on mind). I realize the apple is green and the thought upsets my stomach (mind on body)." Thus we have two exactly opposite series of causal sequence used to explain the same event, and the philosophically minded person is left in hopeless confusion. Further than that, for purposes of medical psychology the solution is impossible. If we can always show the mind affecting the body or the body affecting the mind for the same sequences of events our theoretical considerations and our applications of these will become very much confused. Consequently, all our behavior may be attributed either to twists of the mind or to the biochemistry of the brain, and we cannot distinguish between these for an actual sequence of events. It is quite easy for the person who has some sophistry in metaphysics to see that interactionistic mixture of these languages can end only in confusion. As Southard pointed out, we may account for behavioral events in either a "mind-twist" type of theory or in a "brain-spot" type of theory, but we must not mix the two. For this reason, therefore, however useful it may be in popular parlance, we shall consider dualistic interactionism a scientifically impossible solution.

Another type of dualism is that called "parallelism." The parallelistic solution also accepts the reality of both body and mind. It says, however, that neither works on the other, but they run along together in correlation exactly as two perfect clocks keep exactly the same time but are both run by their own mechanisms. Thus the apple-eating incident may be accounted for either in a purely psychological language or in a purely physical language. Accounted for in a purely psychological language it would be related something like this: "It is summer. My consciousness of fine weather is correlated with feeling good. My goodness of health leads to a decision to take a walk. The experience of walking in fresh air leads to a consciousness of hunger," and so on to the end. Accounted for in a

purely physical language it would be related: "Certain meteorological conditions prevailed. The stimulus of light of certain wave lengths and intensity strikes the agglomerate of cells of certain physical properties and introduces physical changes in some of these," and so on to the end. This parallelistic viewpoint avoids the confusion brought about by the arbitrary admixture of psychological and physiological language. It has one great difficulty, however. It is very hard for the philosophically minded individual to understand how the clocks got so perfectly synchronized. Even the philosophers who have held this position have had to posit God or some other timekeeper to see that one clock did not get ahead of the other. However, this parallelistic position was that most widely held by reputable biological scientists until fairly recently, and it will not lead us into any methodological confusions if we hold to it. Consequently, it is a possible solution for the scientific psychologist, and if the choice is between it and interactionism it is certainly to be preferred.

Neither form of the monistic position, however, is to be considered scientifically. The idealist says that the psychological world alone has reality, while the material world is simply an illusion. The materialist, on the other side, says that the psychological world is an epiphenomenon (*i.e.*, has no real existence but arises as a sort of shadow of the material), and only real matter exists. On first view of these two positions the materialistic is undoubtedly the more tenable. We have every reason to believe that the physical world had a long and real history before psychological phenomena existed at all. Modern research in philosophy, however, has shown that differences of opinion which may not be decided by some experiential criterion are meaningless. To put this viewpoint into a slogan: "A difference which makes no difference is no difference."[1] Let us say that the equally close friend of a materialist and an idealist is run over by a motorcar. Thus the idealist holding that only mental events exist supposes his friend run over by an ideal automobile and dying an ideal death. The materialist, on the other hand, loses a material friend to a material automobile. Since the friend is dead, and we suppose both philosophers kindhearted persons, there is no way of distinguishing the *idea* of heartache which the idealist attributes to his ideal heart from the *material* physical changes in the viscera of the materialist. In

[1] For this slogan I am indebted to Prof. H. Feigl.

other words, for all practical purposes, whether we are idealists or materialists is inconsequential. We have no real means of deciding whether a purely material individual with an illusory mind suffers a real death by a real automobile, or whether a purely psychological being made up of illusory material suffers an imaginary death by an imaginary automobile. The trouble with the monistic solution of the mind-body problem is that it ducks the real problem by denying it.

Recently some philosophers, most notably the logical positivists (*cf.* the works of Feigl and Pratt), have made it possible for us to see in the difference between physical things and psychological things simply a difference of language expression. Psychological things are real. It is only through psychological reality that we know anything. On the other hand, from our psychological experience we have posited the existence of a physical world about which we know a great deal in physical terms or in physical language. Probably the best solution of the mind-body problem for purposes of science is to posit an organismic *neutralism*. This supposes that the world exists as a neutral substance, being neither body nor mind, physical nor psychological, but that the physical and psychological aspects develop as the two faces of a medal. Psychological reality occurs and has its own laws and sequences, which are just as natural and just as subject to investigation by the scientific method as are the physical aspects of reality. Both aspects are so coordinated that any change which we can make in the physical may create reaction in the psychological, and vice versa, just as any change on one side of a medal must influence the configuration of the other side, even if the change is sometimes hard to discern. Consequently, we suppose that all pieces of behavior have both a mental or psychological and a bodily or physiological aspect. Influencing bodily behavior as in organic medical practices will directly change only the bodily aspects of behavior, and our causal sequences here should be expressed in the language of physics. However, with this change will be correlated psychological changes. On the other hand, influencing psychological experience, as in psychological medicine, will directly change only the context of experience, and such sequences should be expressed in psychological language. With this change there will be correlated physiological changes. Actually this viewpoint does not overcome the philosophical difficulties inherent in parallelism but it better fits our modern ideas of science.

It may well be that it would be more sensible to talk not about two levels, of physiology and psychology, but rather of four or five levels. Thus every problem of behavior presents a physical, a physiological, a psychological, a sociological, perhaps even an ethical aspect. In this book we shall be concerned with the psychological aspects of behavior problems. In many cases, however, we know more about the sociological aspects on the one hand and the physiological aspects on the other than we know of the psychological, and some of this material must be integrated into the work. It is almost impossible occasionally to avoid talking in the popular language of dualistic interactionism. We shall try never to say that a physical state of affairs directly causes a psychological state of affairs. If on occasion we use the popular language it is only because a strict holding to our philosophical position becomes painfully clumsy and circuitous under certain circumstances.

2. The Somatogenic Solution

We have already seen how at the time of Kraepelin superstition was finally overcome and mental disorder was looked on as solely due to brain pathology. This occurred toward the close of the nineteenth century, a century in which mechanistic materialism was the basic philosophy for all biological sciences. The nineteenth century saw the birth of comparative and experimental physiology and comparative and experimental neurology. Very many of the diseases of the body which had previously been understood only symptomatically were now understood in terms of their specific etiological pathology. It was quite natural that, with physical diseases being understood on the basis of a mechanistic biology and with the rapidly increasing knowledge of the nervous system, the Kraepelinian view should have been established at the time.

The somatogenic viewpoint considered mental disorder as brain disorder. Since the brain was rightly considered the organ responsible for psychological phenomena, it was quite natural that extraordinary psychological phenomena should be explained by extraordinary physiological conditions in the brain. The perfectly consequent argument of this school was, "Since we know there is a different biochemistry and biophysics underlying the sensations of green and red, we may be sure that there is a different biochemistry and biophysics underlying John Smith's correct identification of himself and his identification of himself with Napoleon." From this stand-

point research done on the problem of mental abnormality in the latter half of the nineteenth century was done from the somatogenic viewpoint. Undoubtedly at some far-distant future time our knowledge of brain physiology will have so increased that the somatogenic viewpoint may again become the prevalent one. We believe that one legitimate aim of all scientific psychology should be toward establishment of a physiological psychology. There is something more tangible about the biophysics and the biochemistry of nervous tissue, which, when we know about it, will enable us to proceed rapidly in the true scientific sense. Not only are the facts of biochemistry and biophysics more tangible and hence better subject to control and manipulation, but it is easier to grasp and teach the principles of organic medical therapy. Even if this does not mean that we shall be able to reduce all psychological facts to physiological facts, as the nineteenth century thinkers believed would be possible; as we get more and more knowledge of the underlying neurophysiology, more and more of the techniques of psychological therapy will be applied in terms of organic medicine. Somatogenic theory represents a very high type of scientific idealism. I think even most adherents of the psychogenic position would be glad to see the aims of the somatogenic school realized. Unfortunately, however, they are not today realizable. The men who set them up and those who still hold to them are thinking in terms of an ideal science. Despite the fact that we postulate that every change in psychological experience is accompanied by a change in the underlying neurophysiology, we unfortunately know very little about the underlying physiology of either normal or abnormal mental states. There are a few mental diseases, as we shall see, where a specific and demonstrable organic pathology is established. These are, however, by no means the most frequent and even these offer many problems of a psychological nature.

3. The Psychogenic Solution

The somatogenic theory proved sterile in actual practice. We did not advance rapidly in our knowledge of the neurophysiology underlying behavior. Had we done so it is quite probable that the psychogenic school would never have arisen. Some fifty years' study of the problem of mental disease from the standpoint of the somatogenic theorists has added little to our knowledge of this subject. For the most frequent psychoses and for all psychoneuroses

we do not yet know just how the nervous system works biochemically and biophysically differently during the exacerbation of the disease than it does when the organism is functioning normally. On the other hand, we know quite definitely that such behaviors follow with at least some regularity upon certain psychological experiences. From our experience in the World War, we know that fear disabled almost as many men as did gunpowder. From our study of young people developing schizophrenia, we know that this disease develops almost exclusively in young individuals afraid or unable to take over the consequences of adult sexuality. We know that individuals who have been frustrated in any of their major psycho-emotional strivings are the candidates for mental disease. We even know the causal relationships between many of the frustration types and the disease symptoms. Thus we realize today that mental abnormality may be caused by frustrating situations. Symptoms develop from the way in which the organism meets blockages in the psychological field. For the organism in question the frustration is resolved in an economic fashion. This viewpoint, as we saw in the last chapter, followed from the realization that hypnosis was a form of suggestion and hysteria a sort of self-hypnosis. It was developed by many men, most notably Sigmund Freud and his followers.

The realization that many, and perhaps even most, mental diseases developed from experiential factors gave a great impetus to the psychogenic school. Undoubtedly the idea that abnormal psychological phenomena should be studied *psychologically* has advanced our knowledge of mental disease in the last twenty years more than it was advanced in all of history preceding. For a time at least, it looked as if all mental disorder was to be handled by medical psychologists and that in the future the practice of psychiatry would require as equipment only a room in which two people could sit and talk things over alone. This led to a period when among many psychiatrists the emphasis was almost solely on the psychogenic factors of disease. This emphasis was also unbalanced, because, as we shall see, even in those diseases where we understand nearly everything about the psycho-emotional factors involved, problems of organic medicine are constantly arising.

4. The Organismic Solution

The somatogenic and psychogenic solutions are both one-sided. We have seen that the best modern philosophical solution to the

mind-body problem is that which considers every side. From a viewpoint which stressed only the body we moved to a viewpoint which stressed only the mind. Today we are interested in studying the mind *in* the body, or the psyche *in* the soma.[1] Although the mind is *in* the body and derives many of its properties from the body, psychological phenomena must still be understood in terms of psychological laws. Our problem, then, is that of the integrated organism. The problem may be studied at various levels and in various languages. Half of the confusion and most of the debate about the organic and the functional viewpoints could have been avoided if this problem had been stated from the first as follows. Every piece of human behavior, whether it be an unconscious physiological act like elimination or circulation, or a semiconscious act like respiration, or a fully conscious act like writing a poem, may be studied by physiologists in physiological language or by psychologists in psychological language. This solution is called the organismic and is basic to the point of view of this book. Actually, there are many sublevels of investigation within these two major groupings. Thus it is perfectly sensible to talk about the physics, the biophysics, the physiology, the psychology, and the sociology of digestion. It is also just as sensible to talk about the physics, biophysics, physiology, psychology, and sociology of falling in love. The confusion, and it sometimes becomes very great, arises when half of the discourse is in one of the languages and half in another. Now, of course, it is quite obvious to everyone that some problems may be more profitably discussed in some languages than in others. At the present time most physicians can best discuss digestion in the physiological language. This does not mean, however, that for certain individuals to discuss it in the psychological language is by any means unprofitable.[2] Similarly, the delusions of schizophrenics may be most profitably discussed by the majority of physicians in

[1] A similar development has characterized recent social psychology. From the place where we considered the individual alone, or the group alone, we have come through the position where we considered the individual versus the group, or the individual and the group, to the place where we consider the individual *in* the group. Thus the individual becomes a dependent part of the group and derives many of his characteristics from the group. However, he remains a separate entity in certain respects. *Cf.* Brown (1936*c*).

[2] *Cf.* the recent valuable work of Alexander and The Psychoanalytic Institute of Chicago on problems of gastric neurosis. This work is reviewed by Karl Menninger (1938), Alexander (1936), and Dunbar (1935).

psychological language. This again does not mean that physiological discussion of it is either unnecessary or unprofitable. I think that the time may come when all these problems may be equally well discussed in all the languages. Then we shall use the language which is most economical in its language function. At the present time, however, it is necessary for the psychopathologist to be familiar with the grammars and syntaxes of both. To sum up: *Every behavior problem is at the same time a physiological, or organic-medical, and a psychological, or psychiatric, problem.* Since the author of this book is a psychologist, and since the book is addressed primarily to students of psychology, we shall spend most of our time speaking the language of psychology. We shall try, however, not to lose track of the fact that the other languages exist.

5. Illustrations of the Organismic Solution

We can best grasp the wide implications of the organismic solution of the mind-body problem by pointing out that definite psychological factors exist in sicknesses which are usually discussed in the physiological language, on the one hand, and that physiological factors exist in problems usually discussed in psychological language, on the other. In introducing actual psychiatric problems at this point it will be necessary to simplify them. Later on in the book these same problems will be treated in detail. We shall begin by discussing a few problems which were thought in the latter part of the nineteenth century to have been solved in terms of organic medicine and show the presence of psychological factors. From these we shall proceed to problems usually considered purely psychological and show the presence of physiological factors.

Acute Alcoholism (Common Drunkenness).—It may surprise the reader to learn that alcoholic intoxication is a mental illness or abnormality. From the standpoint of the modern theory of personality genesis, however, the personality of the drinker is so changed by the ingestion of alcohol that his behavior may be said to undergo a major change. And this is exactly what we mean by mental illness or abnormality in accordance with our modern views. Alcoholic intoxication brings about a radical change in personality and brings about behavior which may be both antisocial and personally destructive. It is so frequent and well-known that those of the readers who have not personally experienced such behavior will undoubtedly be familiar with it in their friends or, if they move in completely

abstinent circles, from the moving pictures. For this reason it is a good behavior with which to begin our discussion.

Everyone knows what happens when an individual who has no exceptional tolerance for alcohol drinks ten highballs. After the first two he becomes uninhibited, talkative, more sociable. With two more his inhibitions may disappear almost completely. From an individual previously controlled almost solely by the intellect, he becomes an individual almost completely controlled by his emotions. He becomes very gay or very sad, very loving and amorous or quite ready to pick a quarrel. With the ingestion of six or seven he becomes increasingly powerless to coordinate muscular activity. (The uninhibitedness and emotionality continue with this loss of control over muscular behavior. He can no longer walk a straight line or talk straight. Rather he staggers and minces his words.) After about nine or ten drinks he usually goes into a state of somnolence popularly described as "passing out." But before this stage much abnormal emotional behavior occurs. A friend of the author says that whenever he drinks too much, he becomes first lachrymose, then bellicose, although the lachrymose and bellicose states sometimes become inverted, and, finally, comatose. The author remembers seeing an undergraduate weeping over the death of Shelley. The profound mental thought which occurred to this fellow after too many highballs was that poor Shelley was dead and that he would never get to talk with him.

Occasionally, however, the results of drinking become more serious. There are cases on record where well-meaning friends have taken an acutely intoxicated person bodily along with them and poured further liquor down the individual's throat. In some such cases death has resulted. Every so often there is an account in the papers of lethal alcoholic poisoning, where an individual attempts for a wager to drink a large quantity of strong alcoholic beverage in a limited period of time, such as a quart in an hour. Thus the end state of alcoholic intoxication is death.

We have, then, a graded series of behavior which usually follows upon alcoholic consumption. Furthermore, we know quite well what happens to the nervous system during such intoxication.

From the work of the neuroanatomists and neurophysiologists we know that certain parts of the brain are primarily responsible for certain behaviors. Just what amount of exact localization of function exists in the brain is by no means certain but we do know that

intellectual processes are chiefly mediated by the cerebral cortex, the emotional processes by the midbrain and thalamus, the vegetative processes by the medulla and brain stem. We know further that the higher portions of the brain exert some inhibitory control on the lower and that the higher portions are first affected by poisons. For the reader whose knowledge of brain anatomy is rusty or nonexistent Fig. 4 gives a diagrammatic sketch of these relationships.

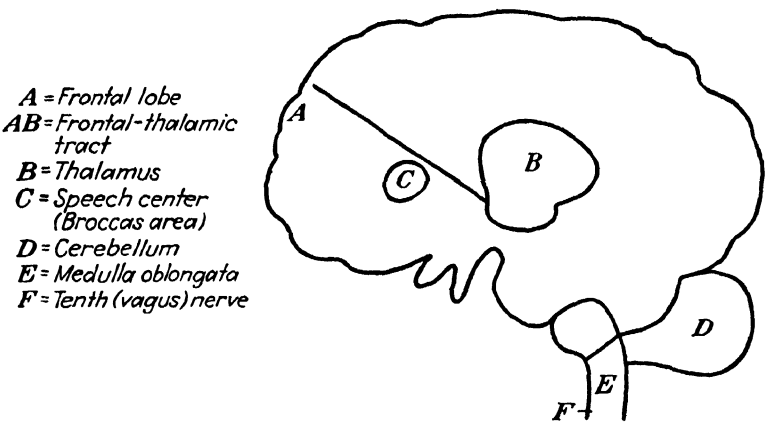


FIG. 4.—Showing the relationship between brain anatomy and the sequence of behavior in alcoholic intoxication.

The fibers of the frontal-thalamic tract first become affected by the alcohol. For this reason the individual comes more under thalamic control and more uninhibited and more emotional. When the cortical control of thalamic function is abolished, the individual is almost completely emotional. Further imbibing leads to partial paralysis of the speech center and so accounts for the slurring alcoholic speech. The alcoholic poisoning next affects the cerebellum, a center for posture coordination, and there is a resulting lack of coordination in muscular movement. In the medulla there is located a center which controls wakeful consciousness. As this is affected the individual "passes out." The tragic cases of lethal alcoholic intoxication are cases where alcohol paralyzes the center of the tenth or vagus nerve, which controls the heart and respiration. From this analysis the somatogenic theorist naturally says, "What could be clearer? The bizarre behavior of the alcoholic is created by the poisonous effects of alcohol on the nervous system. That's all there is to it."

But there is a great deal more to it. The whole problem of why individuals drink at all is not handled in this explanation. The whole problem of why some individuals drink much more than others is not accounted for. The fact that emotional shock is almost immediately sobering is not accounted for. The problem of why the bellicose behavior in my friend precedes the lachrymose behavior in some cases and in others follows it is not explained.

The difference in the use of alcohol as a mild social stimulant and the abuse of alcohol as a psychic analgesic can only be understood in psychological terms. We used to believe that overindulgence in alcohol was simply a matter of habituation. This was the philosophy behind the great American tragicomedy of prohibition. It was believed that by keeping individuals from becoming habituated to alcohol through removing the supply alcoholism would soon disappear. It is well-known that it increased, and probably narcotic drug addiction along with it. Today, while we know just what happens physiologically when an individual drinks too much, we also know that the presence of conflict in the personality, a purely psychological factor, is the cause of the severe and chronic drinking. Thus the alcoholic psychologically is not sick because he drinks, but he drinks because he is sick.[1]

Neurosyphilis.—Neurosyphilis is one of the major medical problems of which we have almost complete control. We know how it is contracted, how the spirochaetes go through the blood stream and affect all the tissues, how occasionally they get into the spinal fluid and affect the nervous tissue. We know how to kill them in both the blood stream and in the spinal column and brain. The first major psychosis for which we have discovered a specific therapy for some cases is dementia paralytica. There are several forms of neurosyphilis but in this connection we will speak of only one. Dementia paralytica, or paresis, or general paralysis of the insane, as it is also called, is the most severe mental disorder following from a syphilitic infection. The brain is actually destroyed and the mind is destroyed along with it. In these cases we can arrest the progress of the disease by organic medical therapy, so that its worst ravages are avoided. Psychiatrists can point with great pride to the work of von Jauregg, who first discovered that the human constitution could stand the alternating chills and fevers of malaria

[1] The problem of alcoholic addiction is more fully treated, with references to the literature, in Chap. XX.

while the organisms causing syphilis could not. "Here surely," the adherents of the somatogenic school are accustomed to say, "is a psychosis which is purely an organic medical problem."

To be sure it is an organic medical problem, but it is a psychological problem as well. The paretic develops certain psychological reactions which are enough alike so that we knew the disease as a disease entity before we knew that its cause lies in syphilitic infection. The delusions of these individuals are very similar. One type of delusion is that of bizarre and irrational grandeur. An example of this may be seen in the case of a little East Side Jewish tailor, a hard-working family man, who, in the course of perhaps his only breach of marital vows, contracted syphilis which went into neurosyphilis and ended in paresis. This individual also had a blood syphilis, so that on certain parts of his body, most obviously on his hands and feet, were running sores. This individual was deluded that he was Christ. He interpreted the sores on his hands and feet as being the marks of the nails of the cross. Although we are not sure, it is highly likely that this delusion had an economic significance for the individual. He was possessed by a strong sense of guilt for his sinning. This could be rationalized by supposing himself incapable of sinning. The presence of the sores on his hands and feet gave the necessary stimulus for the form of his delusion. He was Christ: therefore he was not guilty of his sin.

Of the many individuals who contract syphilis, some estimates placing it as high as 8 per cent of the population, only a few develop neurosyphilis. It is interesting that of the syphilitics perhaps 4 or 5 per cent develop mental disorders in connection with the disease. The reader will remember that we pointed out that about 4 or 5 per cent of the population develop some sort of mental sickness serious enough to require confinement at one time or another during their lifetime. The agreement between these percentages is probably no mere coincidence. Neurosyphilis may be simply the invasion by the spirochetes of a nervous system which is in itself unstable for psychological reasons. Although at the present time we have no definite proof of this psychological factor in the disease, it is perhaps the best theory by which we can account for the fact that in the vast majority of syphilitics the syphilis remains a blood disease.

Furthermore, we know that the psychological picture in paresis may be modified by *psychological* therapy. A few years ago the author heard a medical friend burst into hilarious laughter. The

cause of his mirth was that he had heard about a paretic patient being psychoanalyzed. He said, "That shows you how crazy the psychoanalysts themselves are. Here is the one mental disorder about which we know everything and which we can cure, and we find it treated by psychoanalysis." My friend's mirth was unwarranted. No one would undertake the treatment of neurosyphilis by psychoanalysis alone, but psychoanalysis in cooperation with the organic medical therapy, as Ferenczi and Hollos, Grotjahn (1938), and Schilder (1930) have shown, may do a great deal to relieve the acute symptoms of this disease.[1]

Schizophrenia.—With schizophrenia we come to a problem in which our psychological language is much more adequate than our physiological language. Schizophrenia is the most frequent as well as the most fascinating of the so-called "functional psychoses." At this point we shall not try to describe its symptoms. The mental behavior of the schizophrenic, and its accompanying physical behavior, is very bizarre. There could be no doubt in anyone's mind that a schizophrenic is "crazy." (We shall see later on that many mental disorders are by no means obvious to superficial observation.) Schizophrenia is a disease in which an individual unable to cope with physical and social reality withdraws from it into a mental world of his own. It occurs, as we indicated before, usually in young people at the time when they must assume full social and sexual responsibility. The young person, after his education, is expected by society to support himself, to take a wife or husband, and to start a familial history over again. This means a giving up of the protective atmosphere of one's own parents and taking over parental responsibility oneself. The adolescent period is a sociopsychologically difficult one for everybody, but for some individuals it is so psychologically traumatic that they flee psychological reality entirely, rather than face it. By fleeing reality we mean that the schizophrenic invents through fantasy a dream world of his own in which he can live more comfortably than he can in the world of hard social reality. We see thus psychologically that the symptoms of the disease have a cause and an economy. The cause is social frustration and conflict, and the economy is that the individual can live in his dream world and so exist as a psychobiological organism when the real world becomes so uncomfortable that he

[1] The problem of neurosyphilis is more fully covered, with references to the literature, in Chap. XV.

cannot stand it. We shall see also that the symptoms of schizophrenia have a significance, but we can do that only after we are able to talk of them in some detail. Although a great deal remains to be learned about schizophrenia, we know quite a lot about its psychology. But until recently we knew practically nothing about its physiology.

For some time it has been known that schizophrenics get at least temporarily better during and for a short time after any severe physical illness. It has been noticed by psychiatrists in the tropical countries that when an epidemic of any of the severe tropical fevers strikes a hospitalized group of schizophrenics, those who are afflicted by the disease are better psychologically than those who are not.[1] We have reason for believing that many of the alleged cures of mentally ill individuals by exorcism and torture in the Middle Ages were of cases of schizophrenia who responded to the threat of psychobiological destruction with a return to reality. At the time of writing this book it is being claimed in some psychiatric circles that an organic medical cure for schizophrenia now is at hand in the recently adopted insulin shock and metrazol treatments.[2] It is too early to evaluate this treatment finally, but the success which the treatment has already had does indicate that there are definite physiological problems connected with schizophrenia.

Before the insulin shock therapy was so much discussed, the biophysicist Bancroft developed an organic theory of the major psychoses in terms of the biophysics of nervous conduction and the effect of certain drugs upon the nervous system. Space does not permit our developing Bancroft's complete theory, but Bancroft did find that the intravenous administration of sodium amytal brought schizophrenics who had long been out of contact with social reality back to reality to such an extent that communication could be held with them. At first he thought he had a cure for schizophrenia, but further study by competent psychologists and psychiatrists has shown us that these cures are of little permanent value. For one thing, increasing doses of amytal are required to bring the individual back to reality, and, for another, the individual is simply socialized and not really cured; in other words, even though he reacts socially in a social situation, his psychotic symptoms remain.

[1] Personal communication from Dr. James Merriman Lynch, formerly Assistant Superintendent of the State Hospital of the Republic of Panama.

[2] The nature of this treatment will be given in Chap. XVI.

Consequently, the sodium amytal treatment is not very seriously considered today, although the use of amytal and related drugs opened up a wide field for pharmacological research on psychological theories. Thus in consideration of schizophrenia we see the other side of the picture. Here is a disease which is primarily psychological which offers definite physiological problems.[1]

The Psychoneuroses.—By psychoneuroses in general we mean the milder forms of mental abnormality. At this point in our work we shall not attempt to present them in detail. It will suffice to say that the psychoneurotic is an individual suffering from some physical defect which investigation shows to be due to emotional conflict, as in hysteria, which we discussed in Chap. II, or from some morbid psychological disorder such as fear or anxiety, as in the well-known phobias. Examination after examination by competent physicians shows that there is nothing organically wrong with these individuals. The development of an etiological theory of the psychoneuroses was as great a triumph for the psychogenic school as the etiological theory of paresis was for the somatogenic school. "Here," said the adherents of the psychogenic theory, "is a domain of psychiatry that is predominantly ours. We understand how these things come about and for some of them, most notably hysteria, we have a specific therapy."

But here again the problem is not so simple. It is fairly well known among physicians that gastric ulcers often develop in periods of nervous agitation. Nearly everyone knows the phrase "nervous indigestion." The loss of appetite suffered by individuals in love or suffered by actors, singers, and lecturers along with their stage fright is a phenomenon which everyone goes through. Long periods of such nervous anxiety which we can best and, in fact, only understand in psychological terminology may lead to the creation of stomach ulcers. Once the ulcer is established, however, the problem becomes a medical one. Similarly with the disease known as "hyperthyroidism." Long periods of nervous agitation where the thyroid gland is hyperactive leads sometimes to hypertrophy of the thyroid glands and they thus become a province for the surgeon. But there again thyroidectomy, that is, excision of part of the thyroid, is by no means a permanent cure unless the psychological precipitating factor is removed. As a matter of fact, as Alexander

[1] The problem of schizophrenia is more fully treated, with references to the literature, in Chap. XVI.

(1936), Dunbar (1935), and Karl Menninger (1938) believe, todav we know that even in many of the organic diseases a psychological factor is also involved.

Some psychoneuroses show no organic involvement whatever. These also furnish physiological problems. Here we include morbid anxieties, obsessions, and compulsions. The obsessional-compulsive neurotic is an individual who has a feeling that such-and-such may occur if he does not do this-and-that. The obsession refers to the idea, such as that his hands are dirty even though he has washed them within the preceding five minutes. The compulsion refers to the motor act; he must wash his hands. In some cases of this neurosis the carrying out of the compulsion itself creates the necessity for organic medical treatment which may best be couched in the language of physiology. Similarly, feelings of vague anxiety where no specific factor is feared are due to psychological factors. Thus the phenomenon known as free floating fear, where the individual does not know what he is afraid of or is vaguely first anxious about this problem, then afraid to meet this situation, then worried that something will happen to this person, and then doubtful that he can go through with this test or that, is well known to be caused by psychological factors. Freud first pointed out that the cause of this anxiety was inhibition of sexual impulses. Society, however, forces some individuals to deny their sexual drives. It is socially all right for them to be timid and anxious and afraid, but they cannot admit that they have sexual urges. The extreme form of this is known privately among psychiatrists as "old maid's neurosis." The standard joke of the old maid looking under her bed at night for fear that some man will be there is recognized everywhere to be a wish perverted into its opposite. The anxiety itself may start a vicious circle so that actual organic changes occur.

6. Medicine and Psychology

Modern medicine is concerned with a sick organism rather than with a sick organ. No longer do we treat the symptom as the sickness, but rather as indicative of a sickness in the personality. Everyone knows this with regard to our modern conceptions of fever. The fever is a symptom of disease processes within the organism and is actually the process of the organ curing itself. What the fever does is destroy the attacking forces. We have seen

a good artificial example of this above in connection with the malaria therapy for neurosyphilis.

Similarly, modern psychiatry is concerned also with a sick personality, rather than with the symptoms. The symptoms, as we shall see in the next section, are simply the signs that something is wrong underneath. This something wrong is usually of both a psychological and a physiological nature. In every one of the diseases which we discussed we saw both of these factors. What modern medicine does is use every tool it can possibly utilize to further the life of the individual. When organic medical tools are available, they should, of course, be used. All too frequently, however, and that is what creates the problems of psychology, we know of none. Then we have to use psychological tools. Today it is realized that even in the common clinical diseases many psychological factors are involved. The successful practicing physician uses suggestion of a psychological nature in his treatment of every disease. Even in organic diseases, such as heart disease, kidney disease, and respiratory disease, the presence or absence of the wish to get well is a well-known and important factor.

Since there are psychological and physiological factors in all diseases, the so-called "organic" ones as well as the so-called "psychological" ones, division of labor is undoubtedly necessary. No one can master all of both aspects of modern medicine. No one can really master either the organic or the psychological aspects alone. Although there is much said, and some of it justly, about the advantages of the private general practitioner, his day in medicine is rapidly coming to a close. The best modern medicine today is clinical medicine, where the various specialists work together on each individual sickness and in cooperation. In treating the sick in the future, pathologists, internists, psychiatrists, psychoanalysts, psychologists must all work together. At a not too far distant time, I believe that the checkup which people quite sensibly are having done by their physicians every year or every other year will also be done in a clinic, and a good share of the examination will be psychiatric. We can only really understand the diseases of the mind as being the diseases of a whole organism according to the organismic viewpoint. We have, to repeat, not body and mind, but mind *in* body. Future medicine both in its theory and in its diagnosis and practice will more and more be concerned with the biophysical and neurological, the physiological and the psychological

aspects of all the diseases. I think there are very good reasons for believing that it will soon have to concern itself more and more with the sociological aspects of disease.

Today we realize that many important phenomena of psychology originate in society. In other words, we realize that the individual's accomplishments, his personality, and finally his adjustment and happiness are not simply functions of his physical body or even of his psychological mind, but depend on the individual's position in the whole social order. We have had this viewpoint thrust upon us very rudely by the threatened collapse of western European industrial civilization. It has been pointed out to us by the first and second world wars; it has been driven home to us by the Great Depression and the fear of new world economic crises. It has been realized, as we shall see in detail in Part IV of this work, that health and disease both in their mental and in their physical aspects may be distinguished only with reference to norms established by cultural criteria. Not only is the application of medical psychology to the benefit of humanity imperiled by the present economic and political structure of the world, but the constant danger of world financial crisis and world imperialist war is so great that modern medical science seems almost impotent in the face of such threats. In a book on abnormal psychology we may only point out the urgency of these social psychological problems.[1]

In this book, because of limitations of space and because the author's competence lies in psychology rather than in physiology, our treatment will be more concerned with psychological theory and psychological language than with that of organic medicine. We stress, however, even to the point of being tiresomely repetitious, that neither the somatogenic nor the psychogenic solution to the psychosomatic problem is satisfactory. Rather, modern medicine will more and more rely on the organismic solution.

7. Summary

1. Philosophical analysis indicates that of the various philosophical solutions to the mind-body problem, organismic neutralism is the best starting point for a scientific psychology.

2,3,4. The basic postulates of the somatogenic, the psychogenic, and the organismic solutions of mind-body problem are given. The

[1] The author has expressed his ideas on social psychology in his *Psychology and the Social Order*.

one-sidedness of both the psychogenic and the somatogenic solutions is pointed out. The organismic solution is selected as the basic postulate for this book.

5. A discussion of several types of mental abnormality indicates the presence of psychic factors in those abnormalities usually thought of as purely somatogenic and of organic factors in those usually thought of as purely psychogenic.

6. Modern medicine hence must make increasing use of the discoveries of psychology. The psychology of the individual, however, depends to a large extent on sociological factors. The medicine of the future will probably be sociological as well as psychological.

Bibliographical Note

The philosophy of the mind-body problem is handled exhaustively by Broad. Since his book, important philosophical treatments of the problem have been those of Feigl and (with emphasis on psychology) Pratt. From the standpoint of psychiatry the works of Dunbar (1935), Menninger (1937, 1938), and Alexander (1936) are important. The somatogenic school is best illustrated by the works of Griesinger and Kraepelin (1915). Very few modern texts hold to a strict somatogenic position. Moss and Hunt approach a purely somatogenic viewpoint. The psychogenic viewpoint was developed in the work of Charcot (1892), Janet (1925), and Freud (1924*a*, Vol. I). Few modern texts again represent a purely psychogenic viewpoint. Approaching it are those of McDougall (1926) and Fisher. That there are both psychogenic and somatogenic diseases is the viewpoint held by most modern writers. The psychological texts by Dorcus and Shaffer, Pressey and Pressey, and Morgan all represent this viewpoint. The strict organismic position, however, that there are both psychogenic and somatogenic factors in every human behavior, has been emphasized only recently by Menninger (1938), Dunbar (1935), and Alexander (1936). The argument of this chapter owes much to the keen analysis of Grotjahn (1938).

PART II
SYMPTOMATOLOGY

CHAPTER IV

MODERN IDEAS REGARDING SYMPTOMS

1. Symptoms and Syndromes

In the last chapter we saw that behavior disorders of a purely psychological sort could occur on either a psychological or a physiological basis. We further saw that sometimes what are ordinarily thought of as organic diseases could better be understood as the result of certain psychological experiences. As a result, in medicine we sometimes find "physiological" sickness with a "physiological" causation; sometimes "physiological" sickness with a "psychological" causation; sometimes "psychological" sickness with a "physiological" causation; and sometimes "psychological" sickness with a "psychological" causation. The realization that every piece of behavior is at the same time a physical and a psychological problem has forced us to accept the organismic solution of the mind-body problem and from the organismic standpoint we view symptoms in an entirely new light.

A symptom is a surface sickness. It is the maladjusted behavior itself. Thus a stomachache or any other pain, the loss or exaggeration of any of the sensory functions, the loss or exaggeration of any of the motor functions are all to be looked on as symptoms. Similarly, marked physiological changes in body temperature, in respiratory rate, in blood pressure, or deviations from certain ranges in the basic metabolic rate and in other physiological functions are symptoms. (And on the mental side, vague and unreasoned fears, peculiar or abnormal emotional reactions, irrational beliefs, and false memories are also symptoms.) We used to think that the symptom *was the sickness* and therefore was what we had to cure. In case of fever the aim of earlier medicine was to reduce the fever, in cases of headache and other pains to alleviate the suffering. On the psychological side the purpose of the earlier type of psychotherapy was to make the individual brave in the face of his unreasoned fears and to make him think straight where he was previously deluded. In some branches of medicine even today the cure of the symptom

alone is enough to return the individual to a useful, happy life. Thus, for instance, the oculist is able to correct most of the physical defects of vision with glasses. Many pains may at least be temporarily alleviated by sedatives and analgesics. The use of surgery is a very great boon in connection with certain illnesses like appendicitis and tonsilitis, where the diseased organ may be excised. The suffering caused by constipation is alleviated by laxatives. Even in the sphere of the mental disorders many unreasoned fears and false beliefs and inappropriate emotional reactions may be helped by deep suggestion and hypnosis without really influencing the underlying psychodynamic processes.

The word "symptom" itself, however, means "sign." *Modern medicine is inclined to look on the symptom as a sign of a sick personality.* Although the symptoms in organic medicine are usually concerned with definite organs, such as the heart or the lungs or the sensory organs, modern medicine tends to concern itself less with symptomatic cure, or with the cure of the sick organ, and more with dynamic cure, or with the cure of the sick organism. A symptomatic cure is concerned with removal of the symptom itself and is at the best a temporary procedure. A dynamic or causal cure attempts to remove the basic or underlying maladjustment so that the symptoms disappear automatically. Since psychological medicine has come so late to maturity it is very lucky in this respect. The organismic position in general medicine being already widely established when psychotherapy was new, psychological medicine has been suspicious of symptomatic cures almost from the first. It had to be, because symptomatic cures are even more obviously only symptomatic in psychiatry than they are in organic medicine. Although symptoms are always on the surface, the underlying dynamic cause may often be understood only on the basis of constructed scientific theory. Thus it is quite obvious, when the individual has a headache or a fever or a vague and unreasoned fear, that he is sick and knows he is sick. Such symptomatic descriptions of sickness are given in a descriptive language. The older medicine had no systematic dynamic theory of sickness. Thus the older medicine considered the fever itself to be pathological. Today we consider the fever only as a signal of the toxic process which causes it. Older medicine tried invariably to treat fever by reducing it, but in many cases reduction of the fever not only fails to cure but enhances the underlying pathology. The fever is quite usually brought about through

the process in which the organism is recreating equilibrium. Thus instead of invariably trying to reduce the fever the modern physician controls it and lets it run its course. On the surface, then, we have the symptom, the fever; underlying it there is a disequilibration in metabolism caused by an infection which is a struggle between the organism and some invading force. The situation is quite analogous in the case of psychological symptoms. The vague and unreasoned fear used to be considered the sickness itself. The only treatment was to reason with the individual or to attempt to get rid of the fear through suggestion or hypnosis or even sometimes to replace it with another fear. Just as the modern physician often finds it advisable to control the fever rather than to reduce it, the modern psychiatrist often is in no hurry to remove neurotic fears. The fever is the process through which the organism is seeking a new equilibrium: the fear is exactly the same type of thing. In the last chapter we saw how the anxiety neurosis sometimes arises on the basis of sexual frustration. Modern society, constituted as it is, finds some people who can afford to admit fear sooner than they can afford to admit sexual urges. For them the psychological conflict arising between the biologically conditioned sexuality and the social consciousness of the consequences of this striving would be so severe that they would be completely incapacitated. The neurotic fear which develops on this basis is the "friend" of the sick person, just as the fever is the "friend" of the infected organism. The fear enables him somehow to go on physiologically.

The situation is the same for all the symptoms we talked about in the last chapter. For many individuals an acute alcoholic episode will enable a troubled psyche to continue at least partially adjusted. The schizophrenic's flight from reality prevents him from committing suicide. Even in the cases where the etiology is primarily organic, as in the case of the neurosyphilitic tailor, the psychological symptoms make life more bearable.

All this necessitates a change in the treatment of that part of psychopathology which we call "symptomatology." The older texts were very often nothing more than catalogues of the various ways in which mental functioning could go astray. Ninety per cent of the subject matter was usually concerned with symptomatology and only 10 per cent concerned with the dynamic theory of personality structure and its genesis. Furthermore, since the symptoms were looked on as isolated and individual forms of morbid reaction

they themselves were in no way related to each other. Development of the organismic solution of the mind-body problem and the development of the Freudian theory of psychoanalysis have introduced a new era into psychopathology. It is still necessary to deal with symptomatology. But we can do this in a much briefer space and much more systematically today than ever before. This section of our work will be devoted to a cataloguing of the symptoms of mental disorder. We cannot hope to make it complete because, as we shall see, every mental function may become disordered and in at least several different ways. But since symptoms do constitute the surface signs of mental disorder, we must catalogue them, and since the terminology of symptomatology is a peculiar one, we must learn something about it. Although symptomatology has previously been thought of as the end of psychopathology, today it is thought of as only the beginning. The far more interesting part of our discussion will follow, after we have the necessary language tools with which to carry it on.

The symptom is the single sign, the individual complaint of the sick person. Symptoms scarcely ever occur alone and isolatedly, but rather occur together in fairly well-organized groups. Thus sore throat, headache, and fever along with certain other delimiting symptoms always occur in the disease known as tonsilitis. The presence of certain symptoms and the lack of certain others is the basis of the science of differential diagnosis. Symptom complexes which hang together are known as disease entities or *syndromes*. We shall present the discussion of the single symptoms in this section of the book and return to the syndromes or disease entities after the discussion of theory. We mention the syndrome at this point simply to emphasize that it is usually in the syndrome that the symptom occurs. Only rarely in actual practice do we find isolated mental symptoms: what we get are syndromes which often include quite variegated symptoms. The student who has had no clinical experience very often fails to realize this in his first studies of symptomatology and therefore becomes very confused when he actually sees cases clinically.

2. The Cause, Meaning, and Economy of Symptoms

We have already pointed out that symptoms have a cause, a significance, and an economy. In the following lines we shall enlarge upon and illustrate this statement.

When the symptom was considered the disease or the sickness rather than the sign of it, the underlying dynamics of disease were little understood. Today the underlying dynamics must be investigated for each symptom. We also realize that psychological symptoms have a significance or meaning, although this significance or meaning can practically never be understood from a description of the symptom alone. Very often, as we shall see, the symptom is a denial or a reversal of the underlying cause, and only the realization of this will make its meaning clear. Such a reversal or denial occurs in the cases of anxiety neurosis to which we have referred above. Fear of seduction in the case of the "old maid's neurosis" is the exact reversal or practically exact reversal of the wish to be seduced. As we go on we shall give many other examples of such distorted meaning in symptoms. Furthermore, the symptom has an economy. This idea should be quite familiar to the reader at this point. In every case the organism when sick is regaining a new equilibrium which will allow it to exist as an organized whole, and it is only as an organized whole that it can continue its existence. In the succeeding three chapters we shall not have the space to enlarge on the cause, significance, and economy of each individual symptom. Even if we did, this would be a very difficult task because the nature of the individual symptom may only be understood from the underlying dynamics of each specific case. In order that this most important finding of modern psychopathology should not be eclipsed through the routine study of symptoms in the next chapters two illustrative cases will be given at this point.

These two cases were originally used by Professor English Bagby for didactic purposes, and our presentation is modified from his lectures and book, *The Psychology of Personality*. The underlying dynamic mechanisms in the first case are very similar to those in the case of Elizabeth v. R. first presented in Freud and Breuer's *Studies on Hysteria*. The second case comes from Bagby's experience and is reported by quotation. The author has found that these very well illustrate the modern conception of symptom formation. Both are cases of neurosis. In the first one a "physical" symptom is brought about by psychic conflict. In the second, a psychic symptom results from the same sort of conflict.

A Case of Conversion Hysteria.—A young lady called on a physician complaining of loss of feeling in her right thigh from her hipbone to her knee. Neurological examination showed that there

was no deterioration of the nerve. The diagnosis is simple—that of hysterical anesthesia. In the first interview she was able to report that about a month before she had had a severe nervous shock through the death of her father, whom she loved dearly. This shock was also enhanced by the fact that owing to the financial condition of the family she had had to nurse her father during this last severe illness. She remembered that she was very tired and very sad after the burial of her father, and the loss of sensitivity occurred during this time. Concerning the exact medical treatment of her father's case she remembered very little.

Through hypnosis it was easy to uncover the exact sequence of events which occurred during the father's last sickness. In hypnosis she remembered that the father was attended by an attractive young physician, with whom she quite definitely fell in love. She remembered feeling very guilty that she could entertain not only feelings of love for the physician but also erotic desires toward him, particularly at the time when her beloved father lay on his deathbed. The conflict was most intense one day when the doctor and the girl were bending over the father's deathbed, and her right thigh came in actual contact with the physician's body. At this time she experienced a definite sexual thrill which very much enhanced the conflict situation. Such a conflict situation made her very anxious, or, to put it popularly, gave her a bad attack of the jitters. In hypnosis she even remembered making the resolution that such a thing must not happen again, but out of hypnosis she remembered nothing of the love for the doctor at all.

Modern psychopathology with this knowledge can interpret the cause, the significance, and the economy of the symptom formation. The cause is in the conflict situation. Two opposed libidinal attachments are in conflict. Her love and her duty toward her father are quite incompatible with a love affair with the young physician. These two loves are particularly incompatible since in some ways she is not sure whether the physician is killing or curing the father. This conflict leads to her nervousness and anxiety. Such anxiety is psychologically and physiologically very uncomfortable. She must choose. She "chooses" to forget the physician, and by this repression avoids the conflict.[1]

[1] "Chooses" is not quite accurate. Had she made a discriminative conscious decision, repression would have been avoided. The discomfort of the conflict is avoided by forcing the love for the physician into the unconscious and so con-

In such cases the psychobiological energy of the libidinal attachment, however, does not simply disappear. It is converted into another form, and the form which it takes is one which will have its significance for the personality. Its economy should now be quite obvious. The loss of sensitivity in the thigh is less incapacitating than continued nervous anxiety and feelings of guilt. Its significance, too, becomes obvious. Had the young woman had an anesthetic thigh, she would never have experienced the sexual thrill through physical contact. The anesthetic thigh represents a denial of the conflict situation and is a symptom which may exist along with the melancholic mourning for her dead father. Furthermore, as we shall later see, the sickness enables her to claim attention from her family and to seek out other physicians. This gives her certain social advantages which are called *secondary economy* or *secondary gains*. The *primary gain* is, of course, the resolution of the conflict.

The above case was a case of the development of a physical symptom on the basis of a psychological conflict. Let us now look at a very similar one, where the symptom is psychological.

A Case of a Phobia for Running Water.—We can best introduce this case in Bagby's own words:

A young woman of good heredity developed during her childhood a severe phobia of running water. She was unable to give any explanation of her disorder, which persisted without noticeable improvement from approximately her seventh to her twentieth year. Her fear of splashing sounds was especially intense. For instance, it was necessary for her to be in a distant part of the house when the bathtub was being filled for her bath, and during the early years it often required the combined efforts of three members of the family to secure a satisfactory washing. She always struggled violently and screamed. During one school session a drinking fountain was in the hall outside her classroom. If the children of the school made much noise drinking, she became very frightened, actually fainting on one occasion. When she rode on trains, it was necessary to keep the window curtain down so that she might not see the streams over which the train passed. These are some of the more typical features of her reaction to running water. It can be imagined that her life was very seriously interfered with by the disorder.

During the young woman's twentieth year, an aunt came to visit at her home. This lady had not seen her niece during the whole period of thirteen years through which the phobia had persisted. She was met at the

sciously denying it. The exact mechanisms of repression and unconscious conflict can only be enlarged on in Part III.

station by the mother of the girl, who gave a brief account of her daughter's condition. On arrival at the home, the aunt met the girl at the front steps and said immediately, "I have never told." This statement served to provoke a recall of the conditions under which the fear of running water had been established. The fact is doubly interesting because such determined efforts to stimulate her memory had previously been made by her parents and by various physicians.

The mother, the aunt, and the little girl—she was seven years old at the time—had gone on a picnic. Late in the afternoon, the mother decided to return home but the child insisted on being permitted to stay for a while longer with her aunt. This was promptly arranged on the child's promise to be strictly obedient and the two friends went into the woods for a walk. A short time later the little girl, neglecting her agreement, ran off alone. When she was finally found she was lying wedged among the rocks of a small stream with a waterfall pouring down over her head. She was screaming with terror. They proceeded immediately to a farmhouse, where the wet clothes were dried, but, even after this, the child continued to express great alarm lest her mother should learn of her disobedience. However, her aunt reassured her with the promise, "I will never tell." So at last they returned home and to bed. As the older woman left the next morning for a distant city, the girl had no one in whom she could confide. On the contrary she repressed all thought of her accident and presently she was unable to recall the facts even when a serious effort was made to have her do so. This is the most distinguishing feature of a phobia, its ostensible lack of explanation.

It has already been explained how recall was ultimately secured after thirteen years. It may be added that after the memory had been reinstated, the young woman found it possible to approach running water without discomfort. And gradually the special adjustments of conduct, which the phobia had necessitated, disappeared. [From E. Bagby, *The Psychology of Personality*, Henry Holt & Company, Inc., New York, 1928, pp. 44–47.]

In this case as in the other the cause of the symptom formation lies in the conflict about the possible consequences of her naughtiness. The significance is again that of denial of the original traumatic experience. Had she been phobic to water this terrifying experience would never have occurred. The economy lies in the primary gain of having the conflict resolved and in the secondary gain of forcing attention on to herself.

5. Phenotype versus Genotype

Modern psychopathology is more concerned with the underlying dynamic situation than with the symptom itself. Recent researches

into the method of science have shown that science describes nature at two rather distinct levels. The first level is that of descriptive classification, where the events as they appear to us are described and classified in the language of data, or as *phenotypes*. By a phentotype we mean the descriptive category which accounts for the appearance of things. The second level is that of dynamic systematization, where the underlying causal sequences are investigated through the use of theoretical constructions. This level of description is called that of the language of constructs or the *genotypical* language. A few examples from various sciences will make this clear. The establishment of the law of falling bodies allows us to give an exact phenotypical description of freely falling bodies by putting the appropriate values in the equation $s = gt^2/2$. The description in terms of the language of genotypes, however, is given by the concepts of gravitation and the gravitational field. The phenotypical ideas of boiling and freezing points are given genotypic descriptions through the concept of phases in physical chemistry. The bat and the bird, and the fish and the whale, are phenotypically similar on the one hand while genotypically the bat and the whale belong together. The great advantage of the genotypic language is that from one genotype many phenotypes may be deduced. Thus from the idea of the gravitational field the whole science of mechanics follows, and from the phase rule in physical chemistry the various conditions of matter may be deduced.

It should be easy to see that in psychopathology, symptomatic descriptions are phenotypic descriptions, while the descriptions in terms of the underlying psychodynamics (such as the descriptions of the mechanisms underlying the cause, significance, and economy of the symptom) are genotypic descriptions. Modern psychopathology is concerned with translating the phenotypic descriptions of symptoms into the underlying etiological (*i.e.*, causal) factors expressed as genotypic descriptions. When we say that a symptom has a cause we are implying the existence of a genotype, because in all sciences causation tends to fall into the genotypic language. The significance or meaning of a symptom becomes clear in the translation from phenotypic to genotypic terminology. The economy of the symptom formation is also only understandable in genotypic terms.

All science progresses from the stage where most problems are discussed in phenotypic language to the stage where they are discussed in genotypic language. The transition in languages is

simply a part of the transition from science which only describes to systematic science, which explains and predicts. Physics has largely made the transition, biology is making it, and psychology and sociology stand before it. Of all the branches of psychology, however, psychopathology has developed the genotypic concepts farthest. Before we can demonstrate this, however, we must learn the language psychopathologists use in making phenotypic descriptions.

4. Descriptive Symptomatology Established before Psychodynamic Theory

Descriptive symptomatology was well established at the turn of the twentieth century. Biological and psychological science of the nineteenth century was almost altogether concerned with phenotypic description. The description was, further, atomistic, so that the whole organism was considered simply a sum of parts and total behaviors simply a sum of mechanisms. Psychopathology was concerned with the abnormalities of these part behaviors. Instead of viewing psychological behavior as the behavior of an integrated organism, as we do today, behavior was subdivided into an ever greater number of atomistic psychological mechanisms. These mechanisms were again subdivided, so that finer and finer classification was possible. Thus each mental process was divided into what were supposed to be its constituent parts, and, just as something could go wrong with the whole process, something could go wrong with any of the parts. The end result of this type of atomistic-mechanistic psychiatry was the development of orthodox descriptive psychiatry.

Modern psychopathology has become more and more organismic. The total organism is considered as a unified dynamic system in contact with an environment. Modern psychology is thus concerned with the organism not as a sum of discrete and independent parts, but rather as an integrated whole.

Terminological usage in any science never changes so rapidly as scientific theory. This makes the elucidation of descriptive symptomatology somewhat awkward. Despite the fact, for instance, that we do not believe the concepts of sensation, perception, attention, emotion, intellection, memory, action, feeling, and the like to be discrete and unrelated categories, our only language for the discussion of mental abnormality is one which arose when it was believed that

they were. We have either to accept this system of terminology or to invent a new one. There are too many new terminologies being invented in science these days. For didactic purposes it is quite possible to present symptomatology in terms of the classical language. We must not forget, however, that here we are dealing only in phenotypic descriptions and that the individual symptoms we shall describe seldom occur alone and unrelated. The reader is asked to hold this in mind all through the next three chapters.

5. The Terminology of Symptoms

Like most medical terminologies, that of psychopathology comes largely from the Greek and from the Latin. We have seen earlier that any of the psychological mechanisms may become disordered either through exaggeration, *i.e.*, over- or under-development, or through disguise, *i.e.*, perverse development. The various psychological mechanisms may also simply be absent. Consequently, in symptomatology we apply these four categories of underdevelopment, overdevelopment, perverted development, or absence, to the various sensory, motor, and emotional processes.

The symptomatology may be acquired quite readily by learning the Greek prefixes for these categories and the Greek and Latin nouns for the various psychological mechanisms. Thus the Greek prefix *a* signifies "lack of," and we shall speak of the a- functions of sensation, fear, movement, and the like. The Greek prefix *hypo* means "under" or "too little," and we shall speak of the hypo- functions of sensations, intellection, and the like. The Greek prefix *hyper* means "above" or "too much," and we shall speak of the hyper- functions of sensation, etc. The Greek prefix *para* means "false" or perverted, and we shall speak of the para- functions of sensation, etc. Other prefixes which occur frequently are *hemi* (half), *syn* (with or together), *dys* (bad or morbid), *schizo* (shut off from), *auto* (self), *presby* (old), *stereo* (space).

In the following list we give the most frequent Greek and Latin nouns in medical terminology and their English equivalents. The list gives only the most frequent forms; the equivalents are not the exact translations but the medical meanings.

We do not advise the student to attempt to memorize the list at this time, but he will find later that he can decipher most of the terms used to describe symptoms by turning back to this list. Thus, *anopsia* means "without vision," or blindness. *Hemianopsia* means

"half without vision," or blind in one-half of each eye. Similarly, *apraxia* means literally "without habit," of course, the loss of one or more learned habits; *amnesia*, "without memory" actually, loss of memory.

acusia—audition
aesthesia—feeling
algesia—pain
bulia—will
geusia—gustation
gnosis—knowledge
kinesis—movement
lexia—reading
lochiria—place
mania—excitement
mnesia—memory
noia—reason
opsia—vision
orexia—hunger
osmia—olfaction
plegia—paralysis
phasia—speech
philia—love
phobia—fear
phonia—sound
phrenia—mentality
praxia—habit
prosexia—attention

Hypophrenia means "too little mentality," thus, feeble-minded. *Hypomnesia* means "too little memory," or poor memory. *Hypochondria* indicates "too little tonus," or the feeling of sickness. Similarly, *hyperphrenia* means "too much mentality," or genius; *hypermnesia*, "too much memory"; *hyperopia*, "exceedingly keen vision."

Paranoia is thus "false reasoning," a particular type of delusion which we shall study in detail later on. *Paramnesia* is "false memory."

The Greek suffix *oid* meaning "like" or "in the shape of" is also frequently used. Thus *paranoid* means "like paranoia" or "similar to paranoia" without being so severe, and *schizoid*, "like schizophrenia" or "similar to schizophrenia."

In the succeeding three chapters we shall present the a-, hypo-, hyper-, and para- functions of (1) the sensory processes, (2) the motor processes, and (3) the emotional processes.

6. Summary

1. The symptom is the phenotypical sign of an underlying genotypical process.

2. All symptoms have a cause (in psychic conflict), a significance or meaning (in that they satisfy some unconscious need), and an economy (in that they cause such resolution of the conflict as the total situation allows).

3. The concepts phenotype and genotype enable us to distinguish the old psychopathology, which was largely descriptive of symptoms, from the newer, which explains the underlying dynamics of the symptom.

4. Descriptive symptomatology was established before psychodynamic theory, so in order to understand descriptions of psychopathology the earlier terminology must be learned.

5. The terminology of symptoms is based on a series of Greek and Latin prefixes and nouns. Learning these will allow the student to decipher the meaning of most symptoms.

Bibliographical Note

The idea of genotype and phenotype has been developed in psychology by Lewin (1935, 1936); *cf.* also the author (1935, 1936*a*, 1936*b*, 1936*c*). The idea that symptoms have an underlying cause, significance, and economy is generally held today. Freud's work was of chief importance in its adoption. His work will be dealt with in detail in Chaps. IX to XII. For references to works on symptomatology see the Bibliographical Note appended to Chap. V.

CHAPTER V

ABNORMALITIES OF THE COGNITIVE PROCESSES (KNOWING)

1. Our Contemporary Views of the Relation between Knowing and Feeling and Doing

The atomistic psychology of the nineteenth century, upon which our terminology of symptoms is based, attempted to divide the mental life into increasingly small parts. This process led to a very complex and extended list of mental symptoms. Since the end of the nineteenth century, however, atomistic psychology has been replaced by organismic psychology. The organismic psychology just as the organismic psychopathology stresses the total integrated behaviors of the whole organism. As a first orientation to the newer viewpoint we may say that our lives are made up of *perceiving* goals which we *wish* to obtain and of *obtaining* some of these. This viewpoint leads to a rough division of behavior into knowing and feeling and doing. In other words, on the basis of certain feelings or emotions we perceive or *know* some things as desirable and we act on this knowledge or *do* things to obtain the desirable goals. The procedure of knowing, or cognition, is thus one important side of the mental life. This the nineteenth-century psychologists analyzed into the subprocesses of sensation, perception, association, attention, thought, and memory. In the actual business of living these subprocesses are all closely connected: but for purposes of theoretical analysis as well as for clinical practice it is necessary to deal with them separately. This we shall do in this chapter.

Before we learn the detailed symptoms of abnormality of the cognitive processes, it will be worth our while to see how the cognitive processes are related to the emotional and motor processes in the living human being. There is an intimate relationship between the three. All the important discoveries of modern psychopathology lead us to believe that the roots of mental difficulties lie in the emotions or perhaps even in the basic drives underlying the emotions. The great Swiss psychiatrist Bleuler characterizes this state of affairs nicely when he writes; "All psychopaths are thymopaths." By this

he means that underlying all the disorders of the mind, that is, the psyche, are disorders of the emotions. We can put this in another way by saying that emotional drives underlie not only *pathological* processes in the cognitive and motor sphere but *all* processes in the cognitive and motor sphere. The old saying "The wish is father to the thought," is basically sound. We may also say that the wish is father to the act. And by this we mean *all* thoughts and *all* acts. In the process of growth and differentiation, however, the basic emotional drives and the wishes which result from them become modified and tempered by social reality. Thus the thinking and the acting of the normal individual become adapted to the reality of the physical and social environment. Those of the mentally ill individual do not. In the final analysis mental abnormality is simply maladjustment. To continue our metaphor, if the wish is quite obviously the father of the thoughts and actions of the psychotic individual, a careful analysis of the thoughts of the most learned philosophers and the acts of the most accomplished technicians will show the wish somewhere in the ancestry. From this standpoint we might well begin our discussion of symptomatology with a discussion of the disorders of the emotions. Actually such would be a much more logical procedure. Since, however, the motivating role of the emotions in all mental processes has only been realized in the last half century, and since the nomenclature of symptomatology was fairly well established before this time, we shall follow the conventional scheme of treating first the disorders of the cognitive processes, then the disorders of the motor processes, and finally the disorders of the emotional processes. Strictly speaking, of course, from our new viewpoint there are no disorders of the emotional processes considered by themselves. Rather, all mental disorder results from emotional maladjustment to social reality. But here again terminological usage lags behind theoretical advance.

The overemphasis on the importance of the process of knowing is nicely illustrated in the recent development of education. As a result of the theological and early metaphysical overemphasis on the rational soul as opposed to the instincts, feelings, emotions, passions, etc. (*cf.* Chap. II) formal education has, until very recently, been almost solely concerned with the training in the cognitive processes. In other words, most formal education has as its aim the development of man in his capacities as a knowing animal. Until fairly recently universities in particular frowned on any attempt to train

the students in any kind of "practice." Until late in the nineteenth century motor education, which is today becoming widespread in courses requiring the use of the hands and in athletics, was left completely out of the curriculum. Today we have come to the place where motor training is realized to be almost as important as cognitive training, although even today education in "doing things" tends to be less highly esteemed than education in "knowing things." Only the most inadequate beginnings have been made toward an education in the emotions. Perhaps it is most neglected in the primary school, where it is probably most necessary of all. We do find some rather superficial courses in mental hygiene and the like at the college level. Certain difficulties of course lie in the way of emotional education, the chief undoubtedly being that it cannot be furthered much by lectures and textbooks. From the standpoint of psychopathology, however, training in adequate emotional responses should probably precede training in both the cognitive and the motor processes. That day lies probably far in the future and for the present we must develop our discussion of symptoms in terms of the present emphasis.

2. The Cognitive Processes

Under the cognitive processes we include all the activities through which man becomes aware of both the external and the internal environment. In order to act one must first perceive or gain knowledge of the social and physical reality of the outside world and of the status of his own body. This knowledge of the world about us and of our own bodies comes to us through our sense organs and only through our sense organs. The process of gaining knowledge of the environment through the sense organs is technically called *sensation*. Sensation also is the name we give to the most primitive elements of consciousness. Today we know that pure sensations are probably technical abstractions and that no pure psychological process of sensation exists in the actual living person. Nothing in the immediate psychologically given is a sensation independent of association, memory, attention, and so forth. In clinical practice, however, it is useful to speak of disorders of sensation when these other related processes remain relatively unaffected. The older psychologists speak of *perception* as the normal knowing process of the adult, where sensation is constantly being modified by various memory images. By *association* we mean the process through which the memory images are related and ordered. From birth,

memory is an integral part of the cognitive processes. The activity of combining present sensations and perceptions with past experiences and memories makes up what we usually think of as knowing. Utilizing present perception with memory images and associations gives us the process of *thinking*. In the following paragraphs we shall, in order, catalogue the mental disorders of sensation, perception, association, attention, memory, and the thought processes. All these processes are interdependent parts of the process of knowing.

The disorders of each of these processes may be classified in terms of how the function is affected. Thus, as we have seen, we have the a- and hypo- functions, where the process is lost or diminished, the hyper- function, where the process is increased or overemphasized, and the para- function, where the process is falsified or perverted. Furthermore, each type of disorder may be primarily psychogenic or primarily somatogenic. The word "primarily" is used here to refer to our knowledge of the etiological factors. In terms of actual causation every behavior offers both psychological and physiological problems. For some we have a greater knowledge of the underlying organic processes and these we call the primarily organic. For others our knowledge of the underlying psychological processes is greater and these we call the primarily functional. Our theoretical position remains, of course, the organismic. Since detailed discussion of all the possible symptoms for disorders of the cognitive processes alone would require a whole book in itself we shall merely give definitions and some examples of the various symptoms in outline and choose for illustration only those of greatest psychopathologic interest. Nothing is to be gained by memorizing such outlines. They are given for the sake of completeness and in order that the names of symptoms may be introduced in the ensuing sections without repeated definition. Because of the interrelatedness of all psychic processes it will often be necessary in the ensuing sections to introduce symptoms from other processes before these can be adequately defined. When such terms are introduced the reader may expect the definition and discussion to follow in this or the succeeding two chapters.

3. Disorders of Sensation

Vision.—Of all the various sensory processes, vision is probably the most developed and the most used in adjusting to the outside world. It is also the sensory process which has been most thor-

oughly investigated by psychologists and sensory physiologists. Many of the visual disorders fall in the medical specialty of opthalmology and need not concern us here. Although many textbooks carry lengthy discussions of visual disorders due to improper functioning of the crystalline lens and improper functioning of the eye musculature, such maladjustments are outside the proper sphere of psychopathology. For the purposes of psychiatry, visual defects, particularly if they are uncorrected, may become important causes of maladjustment, but the psychiatrist is not primarily interested in them as symptoms.

The following list gives the chief disorders of vision.

A- Functions.—*Amaurosis* means a total loss of vision, or blindness. The *hemianopsias* are half-blindness, which may be of the same halves of both eyes (homonamous) or of different halves (heteryonamous) of both eyes. A *scotoma* (plural, scotomata) is a blind spot in the field of vision, either central or eccentric, other than those present in the normal eye. Color blindness is technically called *achromatopsia* and is, as is well known, either partial or complete. *Concentric narrowing* of the field of vision refers to loss of visual sensitivity in the outer portions of the visual field.

Hypo- Functions.—The hypo- functions of vision include the various common visual defects such as *myopia*, nearsightedness: *hyperopia* (here a misnomer in our sense), farsightedness: *astigmatism*, indistinct vision due to defective curvature of the crystalline lens: *presbyopia*, indistinct vision due to defective accommodation in old age: *diplopia* or double vision due to a weakening of the external eye musculature.

Hyper- Functions.—The chief hyper- function of vision is *visual hyperesthesia*, meaning increased sensitivity sometimes with pain, and *photophobia*, *i.e.*, fear of light. Photophobia will be discussed in connection with the abnormalities of the emotional processes.

Para- Functions.—Visual paresthesias occur with *photomata*, which are flashes of light or color when no objective stimulus is present.

Occurrences of the symptoms above mentioned, without further psychic symptoms, are usually on a primarily organic basis and chiefly of interest to the oculist. We do have, however, disorders of vision arising on a primarily psychogenic basis as symptoms of conversion hysteria. Thus we may have functional blindness, or anopsia, or functional hemianopsia or functional color blindness. In these cases, however, there are practically always other symptoms

and the evidence of emotional maladjustment. We shall discuss the differentiation of such abnormalities with regard to functional and organic causation in the next paragraphs.

The paresthesias of vision known as "photomata" are of particular psychopathological importance among the symptoms discussed above. The transition from photomata to visual hallucinations is a continuous one. In general the symptom will be called photomata if the patient is completely cognizant of the fact that no adequate stimulus is present in the visual field and a visual hallucination when this insight is lacking. Hallucinations are rarely present without delusions.

Audition.—Hearing is undoubtedly the second most important sense. Like the visual disorders, many of the disorders of audition are of interest chiefly to the otologist, because unless there are secondary psychological symptoms they do not become problems for the psychopathologist.

The following list gives the chief disorders of audition.

A- Functions.—Auditory anesthesia or *anacusia* (the strictly technical word is rarely used) refers to deafness. It may be uniaural (in one ear) or binaural (both ears).

Hypo- Functions.—Deficient hearing may occur in both ears or in the single ear. Some individuals suffer from *tone deafness*, which is to hearing what color blindness is to vision. In partial tone deafness we have either *tonal islands*, where certain tones are heard to the exclusion of all others, or *tonal gaps*, *i.e.*, positions in the tonal scale where tones are not differentiated.

Hyper- Functions.—Auditory hyperesthesia refers to increased sensitivity to sound and is frequently accompanied by *dysacusia*, which refers to the discomfort and annoyance accompanying hyperesthesia.

Para- Functions.—Auditory paresthesias which are known as *akoasms* refer to buzzing or roaring or occasionally explosive sounds within the ears. When these are realized to be purely subjective the phenomenon is not one of psychopathology in the strict sense. When they are attributed to nonexistent outside stimuli, they become hallucinations and as such they will concern us later.

Most abnormalities of hearing, where there is no further psychopathology, occur on a primarily somatogenic basis. Just as some visual defects occur on a primarily psychogenic basis we also have functional or hysterical defects of audition.

Pain, Pressure, Temperature, and Touch Sensations.—Touch, which was one of the classical five senses, has been differentiated into many different sense modalities through modern neurophysiological research. Each of these may become disordered on either a primarily functional or a primarily organic basis in the various abnormal functions. The most important of these are given in the following list. Here, as before, when the symptoms appear without any complicating psychopathology and are realized to be subjective, they have but little interest for the psychopathologist.

A- Functions.—Cutaneous *anesthesia* refers to loss or absence of the sense of touch. It may be used in the narrow sense or it may include *analgesia*, loss of pain sensation, and *thermoanesthesia*, loss of temperature sense. The temperature sense is further subdivided into *atalposia*, loss of heat sensations, and *arrhigosia*, loss of cold sensations. Such usages are, however, rare.

Hypo- Functions.—Diminishment in all the cutaneous senses may occur. The cutaneous *hypesthesias* may also be subdivided into *hypoalgesia*, *thermohypesthesia*, etc.

Hyper- Functions.—Similarly there is found increased sensitivity called *hyperesthesia* for the general cutaneous sense and *hyperalgesia*, etc., for the various subsenses.

Para- Functions.—Cutaneous *paresthesia* refers to false or perverted sensations of touch. They include sensations without objective stimuli, such as occur in delirium tremens and cocaine addiction: the *acroparesthesias*, where there is recurrent numbness of the extremities: the *dyschirias*, where sensations are incorrectly localized: and unpleasant indefinitely localized sensations. Here again, if the subject believes in the objectivity of a stimulating object the paresthesia becomes a hallucination.

The disorders of the sense of touch are particularly important to modern psychopathology because they are quite frequent and because the chief tenets of the modern approach were established through study of them.

Gustation (Taste).—The sense of taste also may be absent, diminished, increased, or perverted. *Aguesia*, which may be partial or total, refers to absence of taste sensations; *hyperguesia* refers to increased sensitivity to tastes: and *paraguesia* to taste where no objective stimulus exists. When the paraguesia is not realized to be subjective, it of course becomes hallucinatory and may become the basis of delusions.

Olfaction (Smell).—*Anosmia*, which may be partial or complete, general or specific, refers to the loss of the sense of smell. *Hyperosmia* refers to increased sensitivity to smell, *parosmia* to false or perverted smell sensations. *Parosmic* sensations, again, when not realized to be subjective, form the basis of many hallucinations and delusions.

Equilibratory, Kinesthetic, and Muscle, Tendon, and Joint Sense. The senses of equilibration, kinesthesia, and the muscle, tendon, and joint sense may all be absent, exaggerated, or perverted. The symptomatology is based on the prefixes a-, hyper-, hypo-, and para- as usual. Thus *akinesthesia* means loss of movement sense, and *kinesthetic hyperesthesia* means increased sensitivity to movement of the limbs. Increase of the sensations of rotation leads to vertigo, etc.

Organic Sensitivity.—Organic sensitivity refers to sensations of hunger, nausea, thirst, and sexual excitation. Thus we may have *anorexia*, diminution of hunger or loss of appetite; *bulimia* (a special term instead of *hyperorexia*), abnormally intense hunger; and *parorexia*, a craving for unusual foods. Parorexia, like the other parafunctions, often is the basis for hallucinations and delusions. We may also have an anesthesia, hyperesthesia, or paresthesia of the sense of thirst. There are, however, no particular technical names for these. For nausea there may be anesthesia or hyperesthesia and paresthesia. Similarly the sensations of sexual excitement may be absent, increased, or perverted. Perversions of organic sensations belong to the field of emotional disorders as well as the cognitive and will concern us in more detail in Chap. VII.

We now have some idea of how widespread the symptomatology of sensation is and how diverse are the symptoms which may develop. When we further realize that theoretically at least each of these symptoms may develop on an organic and on a functional basis, we gain insight into some of the difficulties of psychiatric diagnosis. For illustration of the problems involved in this differentiation, let us consider anesthesia. A more detailed discussion of this most important symptom will enable us to see the problems which arise in connection with the others. Anesthesia means loss of sensation of touch on the skin surfaces. It comes about either through lesion of the proprioceptive nerves connecting the skin surfaces with the proper cortical centers, or as a psychic inhibition of sensory function. The first case is one of organic causation and such cases fall in the prov-

ince of the clinical neurologists. In the second case the causation is psychic and becomes proper study for psychopathologists and psychiatrists. In fact, functional (or hysterical, as they are also called) anesthesias are one of the most frequent symptoms with which psychiatrists have to deal.

In Part IV of this book we shall develop the theory of hysteria in detail. In order to differentiate hysterical and organic anesthesias, however, it will be necessary to foresee our argument at this point.

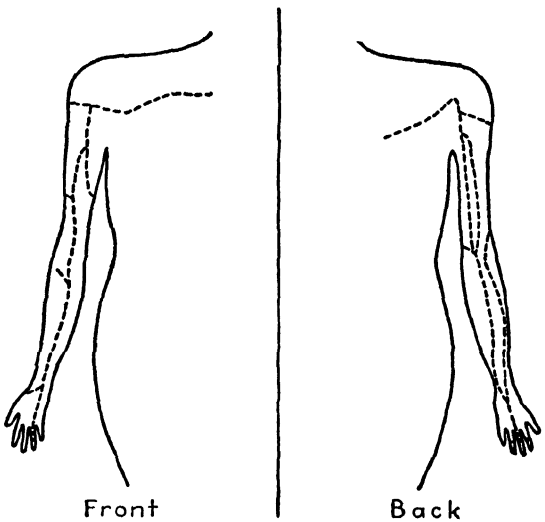


FIG. 5.—Showing the areas of nerve supply to the surfaces of the arm.

As we have seen, psychic symptoms have a cause, a significance, and an economy. In this they may be said to have some significance in the life which it is theoretically possible to uncover. Opposed to this significance is the lack of significance for the life history of the organic anesthesias. The organic anesthesia comes about through destruction or failure in function of the proprioceptive nerves, which usually occurs quite fortuitously through an accident or through the effects of an organic disease on the nervous system. The first step in differentiation is to find out if possible something about the immediate past history of the individual. If there has been an accident or other demonstrable neuropathology the differentiation will be easy.

Neuroanatomy has discovered the chief correlations between the nerves and the surface areas of the skin which the separate nerves

cover. Thus, for instance, the skin surface of the arm may be divided into distinct areas, as shown in Fig. 5, each of which is supplied by a separate nerve root. In the case of actual organic injury to the nerves the anesthesia may occur in all these areas or in any one or more of them. It cannot, however, occur in the hand alone or in the forearm alone. It is typical of functional anesthesias that they occur in some anatomical unit which often, at least, does not correspond with the neuroanatomical area covered by the individual nerve root. Thus if we have a glove anesthesia, that is, an anesthesia of that part of the hand covered by a glove, or a forearm anesthesia we realize immediately that it is functional in nature. So for other parts of the body. Neuroanatomists know the relation of skin area to nerve supply. So, too, a "shoe" anesthesia must always be functional. Psychologists are thus able to realize that some anesthesias (like that of the thigh reported in the case in Chap. IV) are functional rather than organic because the area affected does not correspond to the known anatomical facts about the nerve endings.

Furthermore, the functional anesthesias are inclined to be more variable and subject to suggestion than are the organic anesthesias. It is the common experience of psychoclinicians to notice changes in the affected area and in the depth of anesthesia with fluctuation in the life situation and the emotions of the patient. Very often, for instance, an individual will fail to react to a sharp pin prick in the neurological examination, thus demonstrating a very deep anesthesia, but will be seen to brush away a fly or some other slightly stimulating object from the affected area at some other time. The area affected also varies from one hand to the other hand or from one thigh to the other thigh. Simple waking suggestion will often demonstrate this fact and it can almost invariably be demonstrated by hypnosis. In this, functional anesthesia is much like all the functional disorders.

All these differentiae hang together with our present conceptions of the emotional genesis of functional disorders. The anesthesia always represents the fulfillment of an unconscious wish in some fashion. The conflict is there and can usually be discovered; the anesthesia has a meaning in connection with the conflict, as we saw in the case of the girl with the anesthetic thigh; and the symptom is economic in terms of the present life situation. The great importance of this will become clearer as we proceed with the other disorders.

4. Disorders of Perception

By perceiving, we, of course, mean the actual act of gaining immediate sensory knowledge and by perceptions the content of knowledge so gained. Sensation represents always an abstraction from perception and in some cases the abstraction cannot be adequately made. Thus, photomata, which we saw were fleeting visual images without adequate sensory stimuli, may be classified either as disorders of sensation or as disorders of perception. When they have no reference to any real or imagined outside stimulus we think of them as disorders of sensation. However, when they are interpreted as having reference to some outside stimuli they become that type of perceptual disorder known as a "hallucination." Perception may become disordered with regard to the various sense modalities just as sensation might be so disordered. We find that the a- functions, hyper- functions, and para- functions of perception again are on both an organic and a functional basis. The chief disorders of perception will again be listed:

A- and Hypo- Functions.—*General imperception*, which may occur in any of the sensory modalities, refers to the a- or hypo- functions of the perceptual process. This is, of course, a relative term. In general, one may say that stupid or intellectually defective people suffer from imperception in all the sensory modalities in that they are never properly aware of the real environment. In this sense we shall discuss imperception at more length in our discussion of intelligence. Imperception may also occur on an organic basis as it frequently does in cases of delirium, fever, and toxic psychosis. It also occurs to a greater or less extent in many of the functional psychoses and its role there will be discussed later.

The a- or hypo- functions of perception may also be more specific. Thus, we have a whole series of so-called "aphasias" or loss of language abilities. Some of these, such as motor aphasia (loss of the ability to use spoken language) and agraphia (loss of the ability to write), are concerned with the ability to use language and will be treated in the next chapter as motor disorders. But others are concerned with the ability to perceive language and must be discussed here. *Aphasia* is the general term meaning "absence of language." It is used only in the sense of the loss of a language function which was once present. *Alexia* is loss of the ability to read the written word. Individuals suffering from it are unable to perceive the out-

line of the letters. *Asymbolia* is loss of the ability to gain the meaning of symbols in general. Thus occasionally an individual can read ordinary text but fail to perceive mathematical or other symbols. *Sensory aphasia* is the loss of ability to understand the spoken word. *Amusia* is the loss of the ability to understand music. Aphasias of course are immediately related to memory defects in that the aphasic individual naturally loses his memory for the ability in question. The study of the aphasias has been undertaken by many neurologists and is an important chapter in modern neurology. Aphasias are most frequently due to some organic brain lesions and neurologists have devised rather intricate clinical tests through which they are able to locate the lesions from the nature of the aphasia and secondary neurological signs. Organic aphasias belong to the field of clinical neurology and hence will not concern us farther. Interested students are referred to the works of Head, I. S. Wechsler (1928), and Grinker.

Aphasias may, however, arise on a functional basis. The differentiation of the functional from the organic occurs along the line laid down for a differentiation between sensory and organic anesthesias. The tests of the clinical neurologists which investigate the integrity of the various speech centers and the integrity of the connections between them indicate the probability of the presence and location of a cerebral lesion. There is often a history of brain injury in organic aphasias. Here also inquiry into the cause, significance, and economy of the symptom will help in the diagnosis. The greater suggestibility and variation in the symptomatology which was pointed out in our consideration of anesthesia is also pertinent.

Hyper- Functions.—The hyper- functions of perception occur as opposites to the a- or hypo- functions of perception. Here again the cases of extreme perceptual ability belong to the general problem of intelligence and will be considered under that topic. In that type of functional hyperesthesia which may be looked on as a disorder we usually find the extreme sensitivity of perceptual processes for one sense coming about through a diminishment of the sensitivities for the other senses. Thus an individual may be hyperperceptive as to vision, *i.e.*, he may have to look at things all the time and see many things, but only does so by cutting out the normal sensory perceptions from other stimuli. Such perceptual hyperesthesia is usually related to disorders of attention and to delusions which will concern us shortly.

Para- Functions.—The para- functions of perception are closely related to the para- functions of the thought processes and the association processes. The most important para- functions of perception are the *illusions* and the *hallucinations*. We shall not speak here of the common geometrical-optical illusions which are now realized to be seen by all individuals and are of no psychiatric importance. In the expectation illusions and the hallucinations, however, we have real psychopathological problems. In the expectation illusion there is a false perception of a real stimulating object, while in the hallucination there is a false perception where there is no stimulating object present. In some cases this criterion alone will not distinguish borderline cases in which the expectation illusion might well be called a hallucination or vice versa. It is quite obvious that when a female patient insists that the attending physician is her husband or father we have an illusion, but when the same patient sees her father in the room when no one is present we have a hallucination. The close relationship between perception and thought is illustrated again here because in both these cases the belief in the perception constitutes a delusion. Since it is not always possible to distinguish between expectation illusion and hallucination we shall deal with both together under the general name of hallucination. Hallucinations occur in all the sense modalities, perhaps most frequently in hearing. *Auditory hallucinations*, also called "phonemes" include not only buzzing noises, crackling sounds, and the like, but also voices which attack or defend the patient. Patients frequently hear neologisms or strange words which are nonsensical. Undoubtedly all the phenomena reported by spiritualists of hearing voices of the departed are hallucinatory in nature. Sometimes the voice is heard within the patient, the so-called "epigastric" voice. When auditory hallucinations become complex and systematized they belong to the patient's delusional system. The voices thus heard are often accusing the patient or sometimes defending him. Sometimes he hears his own thoughts as if spoken out loud. Such definitely perceived hallucinations belong really to the topic of delusions, and we shall have more to say about them later. They have a cause in the realm of psychic conflict, a significance or meaning, and an economy. Thus an individual may hear voices (or the voice of God) commanding him to kill his children. The cause in such cases is usually an unconscious hate of his children or of someone

with whom he has his children identified, which cannot be accepted by his conscience. He can accept it as coming from without in the form of a command and so it has meaning. The economy is again that the internal unconscious conflict is reduced. Visual hallucinations are somewhat rarer. The simpler visual hallucinations are like photomata or flashes of light and colored forms. Complex visual hallucinations also exist in the form of people or even scenes. The "visions" of religious leaders and prophets were undoubtedly hallucinatory. Hallucinations of smells and tastes, usually of an unpleasant nature, are also frequent. These again may be connected with delusions of being suffocated or poisoned.

Hallucinations, like anesthesias and aphasias, occur on both an organic and a functional basis. Here the differentiation is quite easy because they never occur on an organic basis unless there is rather clear-cut evidence of a toxic process of the body which affects the nervous system. Hallucinosis is, of course, common in a delirium, in high fevers, and in long organic sickness of all sorts. Functional hallucination differs in several important respects from the type of false perception or false belief that the normal individual may have. In the first place, hallucinations impel attention. The individual finds himself concerned with the voices he hears or the visions he sees to the exclusion of other occupations which should concern him. Secondly, they affect his judgment in that the individual perceives and judges all his social and physical environment in terms of the hallucination. Thirdly, they very often lead to action, in that the voice will tell the patient he must do such-and-such a thing; and these actions are often detrimental to his own safety and that of society. In this way the transition from the cognitive process of hallucination to the motor processes of acting out the hallucination is gradual. It is the fact that the attention, judgment, and actions of the individual are affected by the hallucinations that makes them so maladjustive. In it then we can clearly see how the wish becomes the immediate father of that most important part of the cognitive process, perception. In hallucination we see the basic pattern of all the cognitive disorders, namely, the interpretation of reality in terms of the wishes (although these may often be unconscious) of the patient. Through the precise psychiatric study of the individual the relationships between the wish, which is often unconscious, and the hallucination may be uncovered.

5. Disorders of Attention

One of the most important concomitant parts of the perceiving process is attention. The process of attention refers to the ability of the organism to select perceptually certain aspects of the surrounding environment and to cut out other aspects. As such it has both a motor and a cognitive side. We list the various disorders of attention.

A- and Hypo- Functions.—Absence of attention varies from complete inability to attend to anything in the real environment to partial *aprosexia*, where certain factors may not be attended to. Aprosexia is always present to a greater or less degree in the generalized difficulty of imperception and is also closely related to the perception process. It also may be looked on as being basic to certain association disorders, of which we shall speak next, such as the flight of ideas, where the patient is unable to attend to a logical sequence of ideas.

Hyper- Functions.—*Hyperprosexia* means too much attention and always occurs in connection with persistent morbid perceptions or ideas. It is thus an essential part of hallucination and occurs in obsessions.

Para- Functions. Theoretically we should also find cases of paraprosexia, where the attention process is perverted so that attention is paid to the wrong object in the environment. To a certain extent, of course, both aprosexia and hyperprosexia represent also parafunctions of attention.

6. Disorders of Association

By *association* classical psychologists meant the process which synthesized the sensory impressions gained through sensation and perception and the relation of these to the memory images. Modern psychology is but little inclined to build up the mental whole out of such arbitrary parts. But here again for didactic purposes we shall follow the traditional scheme. Traditionally it is ideas which are associated in the normal association process. From this point of view, one starts with a sensory impression of some sort, properly associates this with certain memory images, and proceeds in a logical sequence toward some given goal. Association, then, is closely related to both thought and memory. It is to be looked on as the vehicle of the thought process and adequate memory images are

essential to it. In the broad sense it may be said that association disorders occur with all abnormalities of the cognitive processes.

A- and Hypo- Functions.—The a- functions of the association process include *dearth of ideas*, *blocking*, and *retardation*. Dearth of ideas results, of course, from imperception or faulty perception, and is always present in intellectual deficiency. It is also present, but not as a symptom, in childhood. It may also occur as a separate symptom in cases of withdrawal from the real world, either in schizophrenia or in depression. The individual suffering from dearth of ideas functions on a decidedly lower level and may have only very few associations, as we find in the intellectually deficient, or he may have the perseveration of fixed ideas, such as we see in obsessions and delusions. Blocking refers to a sudden failure in the sequence of the associations. Thus a person may halt in the middle of a sentence or at the end of a sentence and be unable to complete his line of thought. One may ask a patient, "Why are you here?" and get as an only response, "I am here because _____." From a word "because" he can say nothing. One frequently sees blocking in patients who are mutistic with regard to certain areas of association. Thus schizophrenic patients very often present the picture of trying to say something and not being able to get the words out. *Retardation* is to be separated from blocking in that the associations occur, but very slowly. The blocked individual cannot make the association at all, while the retarded individual makes the association at a very much slower rate than the normal. The distinction between blocking and retardation is an important one in diagnosis. Depressed individuals suffer most frequently from retardation; schizophrenic individuals from blocking.

Hyper- Functions.—Rather than a dearth of ideas or a slowing down of association we may find associations occurring with extreme rapidity. In this case we have, of course, the hyper- functions of association. The ability to carry on a logical consecutive train of associations rapidly is a characteristic of the normal superior mind, and so hyperfunction of association is not to be looked on as a symptom. It is symptomatic when extremely rapid associations have no ordered sequence or consequentiality. In *flight of ideas*, we have the extreme rapidity of association of ideas but in no ordered train of thought. Thus from an advertisement in the classified columns of a daily newspaper: "Give heed indeed to the stars. I am the man from Mars. If we can find some twenty people with $10,000

each to spare to hire workers at $10 an hour we will end the depression O.K. Will end it in a day. Send your contributions to me and then get to church and pray. The depression is God's punishment for our sins. When I have your money prosperity will begin. I am going to found a new political party," etc. If, as above, the ideas presented bear some immediate logical sequence but the phrases or the sentences are not logically related, we speak of flight of ideas. If the immediately associated ideas, however, have no logical sequence we speak of word hash or a salad of words. An example of word hash, taken from a privately printed pamphlet, follows:

WARNING INFORMATION!

In our Declaration of Independence, there are twenty Resolutions. One was written by Mr. Timothy A. Matlack, a Quaker by birth, and of the "Shirt Battalion." He says: "To avoid coming danger and calamities" (Meaning by our Esau and Ishmaelites, Red Indians we found here in these U. S. as Lev. 13:19; Lev. 5:19; Gen. 38:28; Gen. 27:41—when we landed, (Acts 21:5) "a rest and a fast would have to be Proclaimed (Lev. 23:4). So, knowing we trespassed on their land, we should respect our Indians and help the ones who have embraced Christianity, and show our love and protection by letting all the Gentile families claim them as brothers of the wild ass families. Dan. 5:21; Isa. 27:6; Jer. 22:19.

Because it took the God of the Hebrews, Ex. 5:3, Jn. 4:22 after Jesus was killed, Ex. 12:37, to leave old Jerusalem, Ps. 137, to get to these U. S. of A. as was viewed by Moses, Deut. 3:27—Cow or calf shape states—Ex. 32:4, 16, 27; I Sam. 6:10 by the way of walking, Deut. 8:4; Ex. 11; 32, stopping Num. 9:13–28; Gen. 34:30; Ps. 105:12 and begging, Ps. 109:24—The New Jerusalem, middle of the earth, Ezk. 38:12; Rev. 3:12:1 just 1,800 years as Ezek. 48:35, when you divide them into fractional parts as Dan., 12:7; Neh. 11:1; Chron. 12:32; so to begin here this restoration of all things as Acts 3:21; Heb. 9:10—getting ready also for this rest and fast; for me to kill my Beasts Lev. 16:17; Ezek. 16:62, 63, in these U. S. of A., when God in Heaven will kill on the same day Rev. 8:1–10; Isa. 34:4, 5, and the Black Jews we left in Old Jerusalem, Job 30:30; Lam. 5:10 will kill there Num. 7; Zech. 14:1–6 and when we do kill these beasts and seal, will cause these earthquakes Ezek. 38:19; Rev. 8:1; Rev. 10:11.

In extreme cases the words used in the word hash are *neologisms* or coinages of the patient which are meaningless except for the patient. The following lines are part of a history of the universe written by a paranoid schizophrenic patient. "Home of the white swan read. Cea of De is Cea of Evea her Cea is Vena Peal Ponies

in Coe of read as me deal as We God." The differences between flight of ideas and word hash are also of diagnostic importance. Flight of ideas occurs more frequently in manic patients while a word hash is usually indicative of schizophrenia. This problem will be of concern to us later.

Para- Functions.—Among the para- functions of the association process proper we have *perseveration*, where a single word or phrase constantly recurs. This is like children's copycat games but occurs in adults. Thus, for instance, an individual suffering from perseveration may reply to all questions with the perseveration idea. This is, of course, closely related to blocking, where no proper association follows, and to *aprosexia*, which we discussed above. Perseveration of a word or phrase is closely related also to *fixed ideas*, where a somewhat larger sequence occurs. Fixed ideas of an organized nature are basic to *obsessions* and *delusions*, and we shall deal with them later in this chapter. Another important para-function of the association process is inconsequentiality of association, which may or may not be associated with flight of ideas. In *inconsequentiality* the patient is unable to carry on an integrated logical association sequence without introducing a great deal of inconsequential detail. One sees this inconsequentiality almost invariably in the associations of the senile. "What did you do this morning, grandmother?" "Why, I got up and got to thinking of your dear dead grandfather and the happy days when we were first married and did I ever tell you about the time I went to Europe and you don't remember your aunt Kate's funeral of course." "But what *did* you do this morning?" And after much more reminiscence it is discovered she went for a short walk in the park.

7. Disorders of Memory

Perceptions are stored in the mind, thanks to the memory process. For convenience, psychologists divide the memory process into four steps: that of impression, which is equivalent to the perception and consequently will not concern us as memory proper; that of retention, which means the fact that a certain amount of the impressed material is stored; that of recall, where the memory images are reactivated at the will of the individual; and that of recognition, where the individual has feelings of familiarity with material or situations on being presented with them. We know that certain types of changes occur quite normally in the memory process. Thus, the normal memory

image is quite different from the perception of the object. By disorders of memory we mean not this type of regular change, but changes of a more drastic sort.

A- Functions.—*Amnesia* means loss of memory. In discussing aphasia we have already seen a certain type of amnesia. In aphasia one forgets the significance of certain symbols in the environment. The same thing occurs in amnesia. Amnesias may be classified as partial or complete, as temporary or permanent. Partial temporary amnesias are, of course, so frequent that it would not be worth while discussing them at all if they did not play a very important role in the theories of abnormal behavior. Thus, one who cannot at the time recall a name or a phrase or a certain sequence of events but later on does so may be said to be suffering from a partial temporary amnesia. Such amnesias occur nearly every day in the life of everyone. The study of such amnesias led Freud to the belief that the same type of mechanisms occurs in the most normal individual that occurs in the psychopathologic individuals. This is the subject matter of his book, *Psychopathology of Everyday Life*, which we shall treat in detail in Part III of this book. By total amnesia we do not mean the forgetting of everything, which of course would be the equivalent of a real return to the time of birth, but rather the forgetting of whole systems within the personality, particularly those systems which concern the social relationships of the person. This type of amnesia, while by no means a very frequent disorder, is so spectacular that it has attracted popular attention and everyone has heard of it through press reports. In this the individual usually forgets his identity and the details of his personal past history, but remembers the common habitual systems of his personality. He remembers how to read, write, eat, walk, and so forth, but cannot remember his name, who his family is, and other details of his life history. In this symptom the cause, significance, and economy are very clearly shown. Invariably, on investigation, psychologists find that the life situation of these individuals was very unpleasant because of emotional conflict and that this conflict could be solved by the individual's losing his personal identity. He was thus able to fly from an unpleasant life situation and make an adjustment of some sort in the new environment. Cases of amnesia are so frequently reported in the newspaper that the student will be familiar with them. Amnesic phenomena cover the whole range from the temporary partial amnesias of everyday life to total permanent amnesias.

Hyper- Functions.—*Hypermnesia*, like hyperprosexia, or extremely rapid association, is not in itself to be considered a symptom. It is symptomatic, of course, when it occurs with regard to a system of ideas where this particular system may be remembered in the greatest detail to the exclusion of other and more pertinent ideas. As such it becomes an integral part of obsessions and illusions. Hypermnesia is said to occur also under intense emotional excitement, such as in drowning, in certain deliria, in condemned prisoners, and so forth.

Para- Functions.—*Paramnesia* means falsification of the memory process. As we saw above, there is always some falsification in the memory process in that the memory image is never the exact equivalent of the original sensory impression. Paramnesia occurs in connection with hallucinations and delusions. Insofar as the individual remembers his hallucinations as actually having occurred and believes in the events of his delusions he is suffering from paramnesia. Thus, an individual who has auditory hallucinations recalls in memory the hearing of voices, or an individual who is deluded that his wife is trying to poison him remembers the facial expressions which he pervertedly perceived rather than the true ones. There are certain types of paramnesia, however, which are specific symptoms in themselves. Among these should be mentioned feelings of familiarity in strange places and feelings of strangeness in familiar places. Not infrequently patients remember incidents of which they have read or have been told as actually occurring. Such paramnesias, of course, are delusional, and delusions will next be discussed.

8. Disorders of Thought

All the separate processes we have considered occur as integral parts of normal adult thought. A sequence of thought is started by sensations, which through the memory images become perceptions. It is carried forward under the impulse of attention. It is made up of associations and constantly reinforced by memory. Thus when we speak of disorders in the thought processes we presuppose disorders in these integral parts of thinking. There are, however, certain disorders of the thought process taken as a whole which must concern us separately. These are *obsessions* and *delusions*. Both obsessions and delusions are persistent thoughts which have no basis in reality. In the obsession, the patient realizes the morbidity of the thought sequence and, because of this realization, conflict is

engendered: obsessions may be defined, therefore, as persistent unwelcome thoughts. In delusion, the patient believes the thought to be true, just as much as his friends and colleagues believe it to be false. The problem of delusions is a difficult one because our beliefs about the world are constantly changing. History has many examples of people who in their own time were considered deluded but whom posterity came to look on as geniuses. So if we define delusion as a false belief we must set up some criterion for the adequacy of any belief. This is not always easy to do, because we must attempt some definition of reality. We more and more come to the conclusion that reality must be socially defined. By socially defined is meant defined in terms of the beliefs of the so-called "adjusted" individuals in any culture. Consequently in psychology reality is not a matter of complete objectivity but a matter of consensus of belief. Differentiation between normal perception and hallucination is relatively easy because the reality of physical objects is pretty well agreed on by competent observers. In the field of thought, this competency is not so easy to establish. We may in general approach the problem by using the same criterion, namely, the consensus of competent observers within the field. If a reputable physicist should suddenly announce that he believed differently from the vast majority of physicists we would scarcely speak of his thinking as delusional, because this is just what Einstein did and what had been done by Newton and Galileo before him. Similarly in the field of biology, if a competent individual announced that he had good reason for believing in abiogenesis (*i.e.*, the doctrine that life is separately created under certain circumstances), we would be inclined to listen to him and not insist that he be institutionalized. We would know we were dealing with delusion, however, if the belief in the biological field was suddenly announced by the physicist or the belief in the physical field by the biologist. Consequently, we may define delusion as a belief which is not only out of line with the beliefs of other competent individuals but is also out of line with the life history of the individual who holds it.

This definition, along with certain secondary criteria, is sufficient usually to prevent us from making errors in judging the sanity of a person's beliefs. The secondary criteria derive from the fact that, like all disorders of the cognitive processes, the delusion is based directly on emotion. The beliefs of the deluded individual, like hallucinations, impel his attention, affect his judgment, and lead him to actions which may be antisocial. In addition they may *not* be

corrected by argument. An example will perhaps make this clear. An individual with a novel idea which is not delusional may meet great resistance in presenting this idea to his colleagues. He may be laughed at and may even be considered somewhat "crazy." This was certainly true of the first reception of Freud's theory of the neuroses. The scientist's reaction to this usually is to bide his time, collect more evidence, at times even to wait to re-present parts of his theory until the objective situation is more favorable. He continues to believe in the correctness of his ideas but he realizes why his opponents cannot understand them. A person deluded, however, usually shows quite a different type of reaction to his ideas. The criticism of his opponents is either ignored, not perceived, or rationalized. The opponents themselves become the "crazy" ones or the "persecutory" ones. Instead of waiting he will be inclined to rush into the field of conflict with even more extravagant claims for his ideas. Instead of realizing that time will work on his side he will be inclined to try to force the issue. Even with these criteria it is not possible in all cases to differentiate immediately between a delusion and a really novel thought without a more or less detailed study of the person's life history. I believe, however, that with this, distinction may practically always be made. If one knows the emotional frustrations under which the thinker is suffering one can usually show in some detail just how the wish is father to the thought.

Obsessions are one step further than perseveration of fixed ideas in the association process and thus are related to association. Obsessions occur regarding all sorts of things and in all possible situations. They are closely related on the one hand to phobias, which are technically emotional disorders, and, on the other, to compulsions, which are motor disorders. The obsession is always unwelcome in that the patient realizes that this belief or thought is contrary to social reality. People become obsessed with what might happen or what might not happen. They become obsessed with ideas of sinning. A Catholic woman patient whose daughter has recently become engaged to a Protestant reports tearfully: "If Mary goes on with this marriage her children will be damned and monstrosities. Oh, I know that they probably won't, but I can't help thinking that they might. Our priest says, 'Better marry any Christian than an infidel,' and my husband says, 'You're talking nonsense,' but I just can't get rid of the idea. What do you think, Doctor? This silly idea bothers me from the time I awake until I go to sleep and then I even dream about it." Similarly a young man who has just washed his hands:

"My hands are dirty. I don't see any dirt on them. I know I just washed them. But I feel they must be dirty. They seem dirty all the time." The mechanisms of obsession may only be understood, finally, in connection with compulsions and the general theory of psychosexual genesis, which we shall take up in Part III.

Delusions are, however, believed in and not doubted. Delusions may be classified first with regard to their systematization. By systematization we mean the coherence with which the false system of ideas hangs together. There is no difficulty in diagnosing unsystematized delusions (such as are shown in the pamphlet quoted on page 100), where the point of reference is constantly changing, but there is considerable difficulty in diagnosing highly systematized delusions.

Thus the author once picked up a rather well-dressed and apparently educated hitchhiker. On sympathetic inquiry about the man's position he was informed that, "Since you are a college professor I can let you in on a secret. I'm really not a hitchhiker but a sociological investigator of unemployment from _____ University. I'm making a study of conditions on the road." This sounded completely reasonable and the man was asked to address the author's class. On the day before the talk the man visited the author's office and tried to sell him stock in a plan to end the depression by selling corrugated iron houses to the Peruvian Indians. A telegram to _____ University received the reply that no such individual was known to them. This individual had highly systematized paranoid delusions.

Delusions may also be classified with regard to their content. The emotion behind the delusion of grandeur is easy to spot. We would all like to be handsome, rich, and successful in our social contacts. The normal among us realize our limitations in all these things. Even the most normal, however, have daydreams in which they are princes or movie actors or financiers or Don Juans. Delusions of grandeur are thus "daydreams" which are believed in. They occur usually with regard to wealth, with regard to power or nobility (delusions of "Napoleon," etc.), with regard to sexual virility (delusions of having many children). In some cases of delusions of grandeur the normal emotional wish is quite perverted so that delusions take on symbolic rather than actual form.

Less easy to understand are delusions of persecution. Superficially at least, the normal individual finds it hard to believe that he

should want to be tormented or persecuted or to suffer. In Part III we shall see that even in the most normal person there is a great deal of aggressive hostility and some of this is always inwardly directed. In the mentally ill individual this self-directed hostility becomes quite open and we see this need to suffer in an open form. Delusions of persecution may be looked on as the exact opposite of those of grandeur. But there is still an intimate relationship between them. In some cases undoubtedly they represent rationalization of the fact that the grandeur the patient sees in himself is not appreciated by the world at large. The formula, "I am the world's greatest inventor and I have developed a scheme to make electricity for nothing," represents the grandeur side of the picture. But "The General Electric Company has bribed the Patent Office not to give me a patent on my invention," represents the persecution aspect. The whole system represents economy, because by believing in it the individual is able to derive satisfaction from believing in his grandeur and still see no discrepancy between this and his actual position. Delusions of persecution undoubtedly also occur without balancing delusions of grandeur, just as those of grandeur occur without balancing delusions of persecution. In some cases the two are mixed together. For instance, in the cases of delusions of enormity: "I have grown so large that if I urinated I would create a flood, and my social consciousness forces me to inhibit urination: consequently I suffer."

Besides delusions of persecution we have many delusions of a hypochondriacal sort which are unpleasant, as well as delusions of guilt. "My entire intestines have rotted away" in a person actually having an intact digestive system, or "I have committed a mortal sin" in a person whose behavior has really been exemplary are examples of this sort of delusion. Delusions represent the most severe type of cognitive psychopathology. In them, as we have already seen, are evidences of the psychopathology of the parts of the cognitive process. In this chapter we have only described them in symptomatic phenotypic language. In Part III we shall begin to understand the psychodynamics behind them or their underlying genotypes.

9. An Actual Case in Way of Summary

At the start of this chapter we saw that for purposes of didactic exposition it was necessary to divide cognition into a set of mental

processes or mechanisms which rarely occur alone in actual experience. When the cognitively disordered person comes to the attention of the psychologist he rarely shows simple symptoms of sensation, memory, association, and the like, but rather a reorganization of his total personality to stresses and strains in his life situation. Thus all through this chapter we have pointed out the gradual transition between the various types of disorders as we introduced them. In way of summary let us look at an actual case and see how the various symptoms hang together not only with each other but also with the life history of the individual.

A very successful engineer of forty-five years of age became a source of worry to his wife when he announced one evening, "I think they are going to get me!" Had his wife been trained in psychology she would have noticed that this statement did not really arise out of thin air but that her husband's behavior had previously shown eccentricities in many respects. For instance, she might have noticed that he had always looked up and down the street before leaving his office, that he had been pinching his left arm on awakening in the morning and before going to sleep, that the derogatory remarks which he had habitually made about certain business associates had increased in their frequency and in their virulence of late, that he had been sleeping poorly. After making the remark, "I think they are going to get me," the patient went into a panic of fear, broke down and cried, begged for his wife's protection, and lost all sensation in his left arm. It became quite obvious to the family doctor that the man had developed a mental illness, and he was sent to a hospital for psychiatric treatment.

Let us see what symptoms this man actually had. The outstanding symptom was the delusion of persecution. He had come to believe that his business rivals were plotting to ruin his business in two ways. In the first place they were going to spread malicious rumors about him, and in the second place one of them had invented an electrical machine which by special waves would paralyze his left arm. With these delusions of persecution, however, were delusions of grandeur. As we have pointed out, the man was successful but probably not so successful as he desired to be. The rivals were persecuting him to prevent him from arriving at this great success. With the delusions there were disorders of perception. He knew they were persecuting him because voices told him so; *i.e.*, he had hallucinations. There were disorders of sensation because he

actually developed an anesthesia of the left arm, which he thought his rivals had brought about by an electrical machine. There were disorders of attention because he could not get these persecutory thoughts out of his mind and disorders of association because these fixed ideas caused him constant worry. Since he believed in both the delusions and the hallucinations he suffered paramnesic symptoms. He actually remembered the voices and he remembered noticing that Mr. Blank, his rival, whispered about him and gave him a mean look the last time they met.

We shall return to the subsequent history of this engineer in the next chapter. We have already seen that his wife might have been aware that he could leave his office building only after looking up and down the street several times. This is an example of a motor disorder, with which we shall deal in the next chapter. Furthermore, as we go on we shall see how all the disorders in this individual's cognitive processes are essentially to be considered as arising because of emotional frustrations.

In actual practice symptoms rarely occur separately. Sometimes we have cases where the disease itself may be a single symptom; but such cases are relatively rare. Usually we find a related group of symptoms or syndrome such as we have seen in this case of Mr. X. Not always, of course, do we find symptoms through the whole range of the cognitive processes, but whenever we find the higher integrations of thought disturbed we also find disturbances within the essential parts. For that reason the study of symptoms alone is of little value unless we integrate the symptoms with each other and in turn integrate the syndrome with a study of the total organism functioning in his environment.

Bibliographical Note

The literature on descriptive symptomatology is tremendous. All the texts in abnormal psychology (*cf.* Bibliographical Note, Chap. I) of course deal with the topics. Similarly all the chief texts in psychiatry, such as Kraepelin (1915), Bumke (1928–1932), Rosanoff, Bleuler (1936), Strecker and Ebaugh, and White. Bridges's *Outline* (1919) is an excellent quick source of symptom names and their meanings. Morgan's text contains good glossaries. The terms are, of course, to be found in any of the psychological and medical dictionaries; *cf.* Hutchings, Warren, Dorland, and Stedman. These works all refer to material treated in both this and the succeeding two chapters.

The viewpoint that the cognitive processes are functional wholes is, of course, that of Gestalt psychology; *cf.* Koehler (1929), Koffka (1935), Wheeler (1940), and Hartmann.

CHAPTER VI

ABNORMALITIES OF THE MOTOR PROCESSES (DOING)

1. The Motor Processes

In discussing the case of Mr. X we emphasized that in actual clinical practice one rarely sees isolated symptoms of the cognitive processes. In actual practice, in the vast majority of psychopathic cases, some disorders of the motor processes are also present. Thus, Mr. X found it necessary to look up and down the street before leaving his office. This is an example of a motor disorder called a "compulsion," which we shall study in the course of this chapter. In general, motor disorders are the result of defective cognition with regard to social or physical reality. The defective cognitive process in itself arises, however, because of emotional difficulty. In some cases we have the presence of isolated motor symptoms alone, just as we occasionally find isolated cognitive symptoms, but in general there is a continuous transition from defects of perception and thought to defects of action.

Just as the mechanistic psychologists attempted to analyze the conscious processes into their ultimate units and explained the complexity of developed consciousness as being built up from these units, so they attempted to analyze motor behavior into its constituent parts. Thus, with regard to the cognitive processes, sensations were posited as the ultimate units, and with regard to the motor processes, individual muscular movements were posited as the ultimate units. As sensations were supposedly built up into perceptions, the single muscular twitchings were built up into reflex acts. As memory processes and experiences modified sensations in perception, so memory and experience modified reflexes in habit formation. Equivalent to the integrated thought process on the sensory side we have integrated total behavior on the motor side. Modern research into motor behavior, particularly into the genesis of motor behavior, has shown that this atomistic type of analysis almost completely

reverses the true process of development. Thus total behaviors are not built up out of the addition of the single reflex arcs, but rather the reflexes are differentiated out of gross bodily movements. One has only to observe the simple habit formations of any young animal to realize that this is true. Many experimental studies have shown us that individual motor acts come about through maturation and differentiation.[1]

The beginnings of symptomatic classification of the motor disorders had been made before the more modern theories of motor development were established, and for purposes of introduction we must again follow the older scheme. Again we must start with a discussion of the disorders of simple muscular acts, continue to a discussion of disorders of the reflexes, habits, and voluntary acts, and finally discuss disorders of total integrated behavior. Since, theoretically at least, each one of these disorders may occur on either a primarily functional or a primarily structural basis, the complexity of the problem will be evident. In this, as in the last chapter, we shall have space only to list the detailed symptoms and discuss some of the outstanding problems.

The presentation of the symptomatology of the motor disorders is simpler than that of the presentation of the cognitive disorders, because it is only fairly recently that psychologists have studied motor behavior in either its normal or its abnormal forms. Owing to the persistence of the dogmas of Christian theology, the chief concern of earlier psychology was with problems which arose in connection with the rational soul. Education was almost exclusively concerned with teaching people how to perceive social and physical reality correctly and how to think straight about it. How one reacted to it was largely left to chance except in those cases where the reaction was particularly antisocial and then it was referred to the clergy or the police courts. Today the symptomatology of the motor processes must include many cases of total behavior disorders which in the layman's mind are not technically psychiatric problems but rather are moral or legal problems. These problems have been treated as psychiatric problems only recently. The nomenclature of symptoms connected with them has developed at the same time with the newer theoretical views on psychodynamics. Consequently, there is no particular need to treat the symptomatology in such detail. For this reason many of the disorders of total inte-

[1] *Cf.* the works of Lashley, Coghill, and Irwin.

grated behavior which theoretically are almost exactly equivalent to the disorders of the thought processes will be merely touched on here and treated in detail in Part IV as psychiatric syndromes.

2. Disorders of Muscular Activity

All human activity is carried out by the muscular system. This system includes the striated musculature, which actually moves the various parts of the body, and the unstriated musculature of the viscera. The unstriated musculature of the viscera is the motor agent for emotional behavior and what we have to say about it will be reserved for the next chapter. In this we shall be concerned with disorders in the functioning of the striated musculature, or the "skeletal" musculature, as it is also called. The underlying physiology of movement occurs through alternate muscular contraction and relaxation. Both contraction and relaxation are instigated by impulses from the motor nerves. Motor-nerve impulses do not usually arise spontaneously, and the motor nerves are in immediate contact with the association tracts of the brain and spinal cord. The association tracts are in direct connection with the sensory tracts, so that motor activity is always stimulated by the external or internal environment. Thus, from the first, motor processes are intimately connected with sensory processes and the division between them is arbitrary. We have emphasized this point repeatedly so that the student does not lose track of the continuity of the cognitive and motor aspects of psychological processes. The various disorders of simple muscular and motor-nerve behavior are listed below.

A- and Hypo- Functions.—Muscular *atrophy* refers to the diminution or withering away of the muscular tissue because of interference with the nutrition of the trophic centers. The disorder is usually organic in its etiology but many times results also upon continued functional paralysis. The complete loss of motor function of the muscles is called *paralysis*. A less complete loss is called *paresis*. There are three chief types of organic paralysis, depending upon the location and nature of the damage to the nervous system. There are the upper motor neuron type, the lower motor neuron type, and peripheral paralysis. Functional paralyses also occur frequently as a symptom of conversion hysteria. *Muscle tonus* refers to the normal state of partial contraction of the muscles. *Atonicity* or *hypotonicity* refers to the loss or diminishment of tonus respectively.

Hyper- Functions.—We find *hypertonicity, i.e.*, increased tonicity, usually on an organic basis but also frequently occurring as a symptom of conversion hysteria.

Para- Functions.—The para- functions of muscular activity are numerous. By parafunction we mean inadequate or maladjusted muscular activity. *Tremors* refer to rapid alternations in contracture and relaxation of the muscle fibers. Tremors may be slow or fast, coarse or fine, regular or irregular. Fast, regular, fine tremors are usually organic in basis, while slow, coarse, irregular tremors may be functional. The *intention tremor, i.e.*, a tremor which occurs only in the performance of voluntary acts, is usually functional. *Spasms* refer to involuntary contraction of muscles and are divided into the *tonic* (continuous contraction) and *clonic* (repeated contraction) types. *Convulsions* refer to widely distributed and continuing spasms of either the tonic or the clonic type. *Atheotosis* refers to diffuse, continuous, tentacle-like movements of the fingers or toes. *Tics* are spasmodic twitchings of small groups of muscles particularly of the face, neck, and shoulders. Tics are usually functional in origin and occur frequently as symptoms in the compulsion neurosis.

Theoretically, at least, all these disorders of simple muscular acts and muscular tonus may occur on an organic or on a functional basis. The differentiation, which is a matter of clinical neurology, is not always easy. In general it is made through the same type of criteria which differentiate organic and functional anesthesias. We must remember that functional anesthesias always represent fulfillment of some underlying emotion or wish. Exactly the same state of affairs exists in the case of functional paralyses and other muscular disorders. The symptoms have a cause, a significance, and an economy. In the organic paralyses we find no such particular significance with regard to the life history of the individual. Organic paralysis comes about through a disease process of the muscles themselves or the motor nerves innervating them. Like the functional anesthesias such behaviors usually occur through accident or through the effects of some organic disease on the nervous system. Here again if there has been an accident or some demonstrable neuropathology the differentiation is easy. Neuroanatomy has further discovered a definite correlation between the muscle groups and the innervating motor nerves, so that, like the anesthesias, paralyses occur only in certain related groups of muscles. Quite frequently the functional paralyses, however, occur in terms of popular ideas of

functional units rather than in the units of nervous anatomy. Here again the clinical neurologist has no difficulty in making the differentiation in these cases. As was the case with the anesthesias, functional paralyses are more variable and subject to suggestion than organic paralyses. An additional criterion is that the functional paralyses are more complete. In organic cases we have paresis rather than paralysis so that only in rare cases do we have complete failure of motor-nerve innervation to the muscles in question. Organic paralysis is usually a matter of diminution of movement. Functional paralysis is frequently a matter of complete inability to move. This is because the functional paralysis comes about from some central, although perhaps unconscious, inhibition. Furthermore, in organic cases of muscular disorder the disorder is often the only symptom. This is because the psychological integration of the personality remains intact. As we saw in the case of the cognitive disorders, the primarily functional disorders are always based on emotional maladjustment and seldom occur in an isolated form. All these criteria together enable the neurologist to differentiate in most cases between functional and hysterical paralysis.

Disorders of the muscles and motor neurons innervating these which occur on an organic basis are most varied. Such disorders belong primarily to the subject matter of neuropathology and neurology and cannot be enlarged upon here. More detailed discussions for the prospective clinician may be found in any of the good textbooks of neurology.[1] Certain disorders of muscular tonus and simple muscular activity are of considerable importance to the study of psychopathology because they occur in the psychoses as differentiating symptoms.

3. Reflex Disorders

A reflex is the simplest integrated motor act. A stimulus activates a sensory nerve, the nervous impulse in the sensory neuron activates an associational neuron at the synapse, which in turn activates a motor nerve, which activates muscle fiber. Such simple reflexes as that just described are called "spinal reflexes" and probably exist only as abstractions. At the first synapse there are neural connections with the higher integrating centers which send impulses to the cerebrum, and the proprioceptive nerve endings in the musculature start nervous impulses back to the cerebrum

[1] For instance, I. S. Wechsler and Grinker.

before the movement is complete. Thus, even in reflex arcs the whole central nervous system is acting as a unified whole. So much theoretical work, however, has been based on the abstract concept of the spinal reflex that it is the usual starting point for neurological theory. The involuntary spinal reflex is, however, only the starting point for reflex neurology. Reflexes may be voluntary as well as involuntary. The voluntary ones will concern us under the heading of voluntary acts. Here we shall be concerned only with the involuntary reflexes. The classification of the various reflexes belongs to the subject matter of neurophysiology and will not be enlarged upon here. The clinical neurologist must have specific training in eliciting and judging the adequacy of the various reflex responses. Since, however, reflexes may disappear or be exaggerated on primarily functional grounds it will be necessary to present a list of reflexes. Table 1 is taken from Dorcus and Schaffer. The table is divided into four columns, the first of which gives the name of the reflex; the second, the nature of the response; the third, the nature of the adequate stimulus; and the fourth, the neurological significance of the a-, hypo-, or hyper- function of the reflex.

Most disorders of the reflexes are organic. Like functional anesthesias and functional paralyses, functional disorders of the reflexes show some significance with regard to the life history of the individual. The same criteria may again be used to differentiate them. In some cases the differentiation is remarkably easy because of definite neurological signs or because of demonstrable neuropathology. Even in borderline cases the differentiation may usually be made on the basis of a complete psychiatric case history.

4. Habit Disorders

By the term "habit" we refer to the integration of simple reflex acts by experience so that these activities are performed without marked feelings of conscious volition. Habits may again become disordered on both an organic and a functional basis. The chief disorder of habit is the loss of ability to perform a habitual act where there is neither paralysis of the musculature nor impairment of reflexes. Consequently, either there must be organic damage to the higher integrating centers or the loss must be on a purely functional basis. The same problems arise concerning this differentiation that we have already met in our discussions of anesthesia and paralysis

TABLE 1.—REFLEXES*

Reflex	Response	Elicited by	Indicates
Abdominal	Contraction of muscles around umbilicus	Sharp stroke on abdominal wall from the margin of ribs downward	Integrity of cord from 8th to 12th thoracic nerves
Accommodation (monocular).	Change in lens adjustment	Focusing for far and near objects	Integrity of portion of sensory and oculo-motor nerves. Branches of 2nd, 3d cranial nerves
Achilles	Contraction of muscles of calf of leg	Blow on tendon of Achilles	Integrity of 4th and 5th lumbar, 1st sacral regions
Ankle	Clonic contractions of tendon	Pressure of hand against sole of foot;	Integrity of 5th lumbar, 1st and 2d sacral regions
Biceps	Contraction of biceps	Tapping tendon of biceps	Integrity of 4th, 5th, and 6th cervical segments
Ciliary—normal	Change in size of pupil	Change in light intensity	
1. Argyll-Robertson pupil.	Change in size for distance accommodation but not to light		Found in some cases of tabes, brain atrophy, etc.
2. Haab's pupillary reflex.	Change in size for light but not for accommodation for convergence		Cortical lesion
Ciliospinal	Dilation of pupil	Rubbing skin of neck	Integrity of 8th cervical, 1st and 2d thoracic segments
Contralateral	Flexion or extension of leg when one on opposite side is moved passively	Passive movement of opposite leg	Indicates hemiplegia, meningitis, etc.
Corneal	Eyelid closure	Irritation of conjunctiva. Approach of moving puff of air	Integrity of 5th and 7th cranial nerves
Cremasteric	Retraction of testicle on same side	Stimulation of skin on inner side of thigh	Integrity of cord between 1st and 2d lumbar nerves
Epigastric	Dimpling in the epigastrum; contraction of rectus abdominis muscles	Stimulation of skin in the 5th or 6th intercostal space near axilla	Integrity of cord from 4th to 7th thoracic nerves
Erector spinal	Contraction of erector spinal muscle	Stroking skin along border of muscle	Integrity of dorsal region of the cord
Femoral	Plantar flexion of first three toes of foot; extension of knee joint	Stimulation of skin on upper anterior portion of the thigh	Disturbance in region of 5th lumbar, 1st and 2d sacral. May be produced by myelitis
Gluteal	Contraction of the muscles of buttocks	Stroking the skin firmly over the buttocks	Cord integrity in the region of the 4th and 5th lumbar nerves
Plantar	Contraction of toes	Stroking soles of feet	Normal response of adults. Segmental control by 5th lumbar, 1st and 2d sacral
1. Babinski sign	Extension of great toe	Stroking soles of feet	Normal response in children. In adults this response indicates a pyramidal lesion or a lesion of the pyramidal fibers. May result from a toxic condition

* Reprinted from R. M. Dorcus and G. W. Shaffer, *Textbook of Abnormal Psychology*, The Williams & Wilkins Company, Baltimore, 1934, pp. 60–62.

TABLE 1.—REFLEXES.*—(*Continued*)

Reflex	Response	Elicited by	Indicates
2. Oppenheim reflex	Extension of great toe	Stimulation of inner border of tibia	Pyramidal tract lesion
3. Gordon's reflex	Extension of great toe	Pressure on deep flexor muscles of leg	Pyramidal tract lesion
Psychogalvanic	Change in body potential or change in skin resistance. Probably activity of sweat glands	A sudden stimulus, such as noise, light, an emotional situation	Integrity of motor nerves in region of application of electrodes; also of sensory and central system when those portions are involved. Absence does not necessarily indicate a lesion
Jaw	Clonic movements of jaw	Striking lower jaw lightly with downward stroke. Jaw should be supported lightly with hand	Not present ordinarily. Is found in sclerosis of lateral columns of cord
Knee	Contraction of quadriceps muscles	Blow on patellar tendon	Absence indicates lesion of lower part of cord which occurs in locomotor ataxia, infantile paralysis, meningitis, etc. Increase indicates lesion in pyramidal tracts or hyperirritability of the motor cortex and cord. Controlled normally by 2d, 3d, and 4th lumbar segments
Laryngeal	Coughing	Irritation of mucous membrane of larynx or throat	Integrity of 10th and 12th cranial nerves
Nystagmus	Saccadic movements of eye alternated with draft movements	Rotation, injection of water in ear, and faradic stimulation	Integrity of vestibular branch of auditory nerve. Absence does not indicate lesion. Spontaneous occurrence may indicate cerebellar lesion
Palatal	Swallowing	Stimulation of palate	Integrity of 10th and 11th cranial nerves
Palmar	Contraction of hand	Tickling the palm	Integrity of cervical region of cord; 8th cervical and 1st thoracic
Periosteal	Contraction of muscles of arm or leg	Blow on bones of these members	Disease of lateral columns of spinal cord
Pharyngeal	Swallowing	Irritation of pharynx	Integrity of 9th, 10th, and 11th cranial nerves

*Reprinted from R. M. Dorcus and G. W. Shaffer, *Textbook of Abnormal Psychology*, The Williams & Wilkins Company, Baltimore, 1934, pp. 60–62.

The differentiation again is made on the same grounds, namely, neurological examination, the relation of the symptom to the life history of the individual, and the possibility of deducing the significance and economy of the symptom.

Habits may be differentiated into general habits and specific habits. By general habits we mean the integrated responses which were once performed as voluntary acts but which now are performed on a semiconscious automatic basis. The ability of lower nerve centers to take over the control of such activities as brushing our teeth, unlocking doors, dressing ourselves, playing certain recreational games, attending to housework, while our conscious activities are otherwise involved is a great psychological economy. Loss of any of these general habits is called *apraxia*. There are specific apraxias, however, for which there is more detailed nomenclature. Particularly important are the apraxias and other disturbances of posture and walking and of the various language habits.

Disorders of Motor Language Habit.—Besides sensory aphasia and alexia (*cf.* Chap. V), the aphasias include the following failure of motor language habits. *Motor aphasia* refers to the loss of ability to speak words, while *agraphia* means loss of the ability to write. This may be combined with other aphasias but may also occur as a single symptom. Sometimes a patient loses the ability to express his thoughts in gesture, which is called *amimia*. *Aphonia* refers to loss of the voice. Another individual may use gestures inappropriate to his thoughts and so suffer from *paramimia*. Parafunctions of language also include many specific writing defects and speaking defects. These range from *writing tremors*, which are frequent in alcohol and narcotic addictions (the "writing jitters"), through *paretic writing*, which shows tremors but also shows omission, reduplication, and interchange of letters or syllables, to *pseudographia*, which refers to the production of meaningless written symbols. Also to be classified as disorders of written language are mirror writing, where the writing is inverted, and automatic writing, where the production is under the direct control of the unconscious.

Speech defects include the well-known *stammering* and *stuttering*, *lisping*, as well as *paretic speech*, *mutism*, *echolalia*, *logorrhea*, *coprolalia*, *pseudalalia*, and *neologisms*.

Paretic speech is drawling and tremulous and, like paretic writing, omits words and syllables, reduplicates others, and interchanges still others. Thus one suffering from paretic speech may pronounce, "Methodist Episcopal" as "Medist pispocal" or "medical electricity" as "mecidal extricity," etc. *Mutism* refers to inability to speak at all and is, of course, related to blockage (*cf.* Chap. V) but is more complete. *Echolalia* refers to the repetition of any phrase or word addressed to the patient by him. It is similar to the copycat

game all children play. *Logorrhea* refers to extreme garrulity, where words follow each other in free flight as in the flight of ideas. *Coprolalia* refers to the excessive use of obscene words. Certain walks of life breed perfectly "normal" coprolalic individuals. In psychopathology it refers chiefly to outbursts of obscenity in individuals not usually given to such language or under extremely improper conditions. *Pseudolalia* refers to the production of meaningless sounds (*cf.* pseudographia). *Neologisms*, or the psychopathic manufacture of new words, have already concerned us in connection with the association disorders.

Disorders of Posture and Walking.—*Ataxia* refers to extreme uncoordination of muscular movement and posture. *Static ataxia* is the inability to coordinate while at rest. When an individual is unable to stand without swaying or falling when his eyes are closed we have an example of a static ataxia known as the *Romberg sign*, which is of considerable diagnostic importance. *Motor ataxias* are found in the inability to coordinate movements, such as the inability to place finger to finger or finger to the nose while blindfolded. They are also of considerable diagnostic value in neurology. The specific walking disorders include *paretic gait*, which like paretic writing and talking is uneven, slow, and shuffling: the *ataxic gait*, characterized by stamping, drawing the back foot slowly after the fore foot: the *steppage gait*, high knee action with dangling foot and scraping toe. All these defective gaits are usually organic in origin, and more extended discussions will be found in the works of clinical neurology. *Astasia-abasia* refers to the inability to walk or stand without support, which often occurs in hysterical patients on a functional basis.

5. Disorders of Voluntary Acts

By voluntary acts in contradistinction to habits we mean total integrated reactions which require the willful decision of the subject to fulfill them. They include the act of willing and the fulfillment of the willed act. Thus there are certain psychopathologic symptoms of the will which must concern us first.

The term *abulia* refers to lack of or weakness of the will. Occasionally patients lack the power of willing to do anything. Abulia is closely related to the emotional symptoms of depression which will be introduced in the next chapter. Abulia may be generalized or may refer to some specific action tendency, where there is a "blocking of the will" with regard to certain actions alone. Thus patients sometimes fulfill all sorts of acts but cannot "will to eat" or cannot

"will to get up" or cannot "will to live." Besides abulia we have cases of *hyperbulia*, where there is either a general pressure of activity or a specific pressure for a certain activity.

Besides the psychopathology of the will the psychopathology of acts must be considered in connection with voluntary acts. The *catalepsies* refer to conditions of muscular rigidity which come about on a functional basis and represent withdrawal of the patient's interest in voluntary acts. They may be distinguished from organic contractions on neurological grounds and through knowledge of the case history. Catalepsies are usually divided into two types which, however, merge into one another. The first of these is called *cerea flexibilitas*, which is the Latin for "waxlike flexibility." Such patients may be placed in the most unusual positions; they will continue in these positions until they are changed or only resume a more natural position through exhaustion. Thus, arms and legs may be elevated, hands stretched out, or bodies bent as if the patient were an automaton made of wax. In *rigid catalepsy* the patient himself assumes a definite postural or bodily attitude from which he can be removed only by extreme force. The hands assume a praying position or the fist a menacing one. The body may be held bent over or the head thrown back. Psychoanalysis of such cataleptic postures usually indicates a cause and a significance for the posture.

Compulsions are acts inappropriate to social reality which are carried out by the individual under the feeling he must do them or are unconscious repetitions of meaningless acts. *Ritualistic acts* are a type of compulsion in which little ceremonials are gone through by the patients as preliminary or accessory to the ordinary acts of life. Thus, some individuals must bow before going through doors or turn in a circle before sitting down or count all the fence posts when walking or read all the numbers on banknotes before spending them. There are certain specific compulsions like *kleptomania*, *i.e.*, an irrepressible impulse to steal; *pyromania*, *i.e.*, an irrepressible impulse to start fires; *dipsomania*, an irrepressible impulse to get drunk.[1] The problem of compulsion is of such importance to psychopathological theory that we shall enlarge on it briefly.

Compulsions are related to obsessions. Obsessions are persistent, unwelcome, morbid ideas. Compulsions are persistent tendencies to act in a morbid fashion. In both cases the patient usually has

[1] A dipsomaniac, contrary to popular misusage, is not a chronic alcoholic but one who drinks occasionally in a compulsive fashion.

insight into the morbid nature of the process but is unable to control it. Compulsions are closely related to obsessions and we usually find both present in the same patient. An individual may be obsessed, for instance, with the idea that his hands are dirty, although on looking at them he sees that they are perfectly clean. This persistent unwelcome morbid idea may occur to him many times during the day and can only be removed from his mind by his going and washing his hands. In this case we see that the hand-washing mania or compulsion is the direct resultant of a perverse neurotic thought or obsession. The symptoms of compulsion indicate very clearly how directly and closely related are the cognitive and motor aspects of the disordered mind. Closely connected to compulsions are the many forms of disorders of total behavior. All these in their turn are closely related to emotional disorders such as anxiety states and phobias, of which we shall speak in the next chapter. Actually it is only for purposes of classificatory convenience that we may separate them at all. Compulsions are typical functional or psychogenic disorders for which in every case we may find a cause, a significance, and an economy if we know enough about the life history of the individual in question.

6. Disorders of Total Behavior

We have already seen that the psychiatry of but a few years ago was primarily concerned with the disorders of the cognitive processes. Not only is modern psychiatry concerned with abnormal and disordered perception of the real physical and social environment, but it is equally concerned with anti-social and disordered reactions to this environment. It more and more concerns itself with behavior problems in the fields which were previously the concern of the moralist, the criminologist, and the lawyer. Thus, as the disordered thought process of delusion represents the most extreme abnormality of perceiving the world, criminal and antisocial acts represent the most extreme abnormality of reacting to the world. This field of psychiatry is so new that we have no specific nomenclature of symptoms to introduce at this point. Our presentation of the symptomatology of motor disorders would be incomplete, however, if we did not point out that the psychiatrist today looks on most cases of criminality, sexual perversion, and other antisocial acts, such as alcohol and drug addiction, as psychiatric problems. These will be handled in more detail in Part IV.

7. Return to Case in Way of Summary

Let us return to the consideration of Mr. X, referred to toward the end of the preceding chapter. We have already pointed out that he felt it necessary to look up and down the street before leaving the office building. This behavior is a motor disorder of the sort that we have described in this chapter as a compulsion. This man, however, had other motor disorders as well. We saw that he had been pinching his left arm on waking and before going to sleep, which is another compulsion based on the delusion that his business associates were trying to anesthetize him with an electrical machine. When he really developed the anesthesia and went into the panic of fear he also suffered from abulia, that is, loss of general volition. He developed finally a certain neologistic formula with which he thought to avoid his enemies. His fear of being noticed in certain places led to a mutism in certain vicinities, and this same fear made it impossible for him to write any numbers because by so doing he would give away the secret formulas which he had developed. Continued functional anesthesia of the left forearm gradually developed into a paralysis so that he was unable to move the left forearm at all. In the later course of his history, during periods of particularly severe anxiety and panic he would go into pseudoconvulsive spasms.

Thus in actual cases we find disorders of the motor processes closely associated with the disorders of the cognitive processes. In this case we have already spoken of the panic of fear which bothered this individual at the onset of his disease. Such anxieties occur before the actual development of practically all the psychoses and psychoneuroses and are basic to them because disorders of both the cognitive and motor processes arise on the basis of emotional disorders. In the next chapter we shall go into the symptomatology of emotions and thus complete the picture. In this connection we shall again return to the case of Mr. X and show how both his disordered thinking and disordered acting are connected with emotional frustrations.

Bibliographical Note

For general works *cf.* the bibliographical note at the end of the last chapter. The viewpoint that motor behaviors represent functional wholes is, of course, that of Gestalt psychology and of Lashley, Coghill, and Child.

CHAPTER VII

ABNORMALITIES OF THE EMOTIONAL PROCESSES (FEELING)

1. The Emotional Processes

The most recent developments in scientific psychology have been concerned with the psychology of the emotions. Until fifty years ago, even men of science were inclined to look on the emotions as something decidedly less worthy of study than the cognitive processes and to view them as lower and baser forms of activity. Despite the fact that novelists and poets and some philosophers had been concerned almost exclusively with the emotions, psychologists had done little more than classify them and make very generalized theories as to their nature. The slowness with which the psychology of the emotions developed was a result of the prevalent dualistic theology. This theology supposed a constant interaction, and sometimes a struggle, between body and mind or body and soul. The rational soul which came directly from God had in its course here on earth to prove itself with regard to temptations arising in the body. These temptations had a strong emotional tone. The emotional life was considered baser than the rational life because it was directly connected with the body. Those theorists of antiquity and medieval times who considered emotions and feelings at all as psychological problems attributed them to a lower type of soul. Plato wrote of the Head Soul, the Heart Soul, and the Belly Soul, and what we now call emotional processes were mediated partially by the Heart Soul and partially by the Belly Soul. Following him, Aristotle spoke of the Rational, the Appetitive, and the Nutritive Souls, and what we would now call emotion was taken care of by the Appetitive Soul. This division in Aristotle's psychology found its way into the Neo-Aristotelianism of the Catholic Church and, with some further modifications, into Protestantism. Thus even today the ethical life is largely concerned with the control of emotional activities. The whole direction of our schooling in ethical problems and problems of correct behavior has been, until very recently, schooling in emotional

inhibition. The child must learn to control his loves and his hates, his fears and his rages, his moods of excitement and depression. Despite the fact that civilization requires emotional control and emotional inhibition, most of us who are honest with ourselves realize that, were it not for the promise of certain emotional satisfactions, life would be scarcely worth living at all. Thus, the adolescent child is promised the possibility of a love relationship in marriage if he obeys the rules of morality during his teens. Even the aggressive urges of hate are promised periodic outlet in possible future wars.

No doubt many points in the older views regarding emotion were basically sound. It is quite obvious to everyone that, if civilization is to go on at all, the emotions must be curbed at some times and redirected at others. The modern view breaks with the older pre-scientific view not at all on questions of *ethics* but rather on questions as to the *nature* of the emotions. Emotions are today considered as natural phenomena exactly as worthy of psychological study as any other form of behavior. They are further seen to be biologically more basic than other forms of behavior. They are closely connected with the sources of energy for the cognitive processes, or knowing, on the one hand, and the motor processes, or doing, on the other. We have already indicated that modern psychology is inclined to look on personality genesis as the resultant of the ways in which frustrated urges are resolved. The frustration of urges gives rise to emotional experience which is unpleasant in nature while the overcoming of frustration gives rise to emotional experience which is pleasant in nature. Most of our lives are concerned with avoiding the first sort of experience and seeking the second. Both the avoidance of pain and the seeking of pleasure, however, become very complicated phenomena in the human because of the control which his intelligence has over them.

All modern discoveries in the psychology of the emotions lead us to believe that the dynamic energy behind all human activity comes from *urges* or *needs* which are closely connected with the emotions. We learn things and we do things because of some disequilibration of these basic sources of energy. All phrases like "I want," "I need," and "I wish" are connected with such disequilibration. The perception of goals, as either desirable and hence to be sought after or as undesirable and hence to be avoided, always is experienced with emotion. Actually every psychological act is accompanied by emotional components although sometimes superficial observation fails

to demonstrate this. Such emotional components are quite obvious and near the surface in the case of behaviors like fighting and love-making, which everyone realizes to be emotional, but they are also to be discovered in the thoughts of the most learned philosophers and in the skills of the most practiced technicians. One of the great services of psychopathology has been to prove this from the study of the thought and activity process of psychotic and psychoneurotic individuals. The psychoses (or major mental illnesses) are behaviors primarily determined by the fact that emotions which the normal individual holds in the background are allowed immediate outlet in behavior in some perverted form.

There is a great deal of confusion concerning the terminology and definition of urges, emotion, and feeling. To get an adequate working definition, we shall define *emotion* as the *conscious concomitant of conflict or frustration in the psychological field.* Such frustration gives rise to the basic feelings of pleasantness and unpleasantness. Conflict in the psychological field supposes disequilibration of the parts of the personality, and from this disequilibration comes the energy for action. Such disequilibration arises from basic urges or needs which are largely biological in nature. The forces which give rise to emotion in conflict are the motor forces of behavior. We shall use *urge* to refer to the sources of energy for conflict and *emotion* to refer to the conscious concomitant of conflict. In general, we shall say that feelings of pleasantness arise when the barriers in the field are being overcome and feelings of unpleasantness when the barriers are being strengthened. The conscious elements of the emotions are classically called "feelings."

2. Pleasantness and Unpleasantness

Psychologists have spent a great deal of time in devising theories concerning the subjective make-up of the feelings and emotions, and there has been a great deal of argumentation between the adherents of various views. There have been so-called "tridimensional theories" of the feelings, like Wundt's, "bidimensional theories" like Royce's, and "unidimensional theories" like Titchener's. Such theories have now little more than historical interest. Not only did the older psychologists spend a great deal of time debating the dimensionality of emotion and feelings, but they spent a great deal of time in developing theories as to the nature of emotion. Thus nearly every student of psychology has learned something of the James-

Lange theory of emotion, which considered emotion simply the consciousness of the bodily concomitants of emotion. He has probably heard of Cannon's physiological researches, which indicate that in the thalamic regions there are centers of feeling tone and emotion which to a certain extent contradict the James-Lange theory. The intricacies of these debates need not concern us further. As psychologists, we shall have to posit some motor force to account for behavior at all. We thus posit the urges which give rise to conflict. Emotions then become the conscious concomitants of conflict or frustration in the psychological field.

The older theories of emotion were concerned with the description of the consciousness of emotion. That so many variant theories arose came from difficulties which are inherent in trying to verbalize emotion. Undoubtedly, emotional experience is primitive and diffuse and has little differentiation, while verbal responses are the most differentiated responses of the developed cognitive process. We all know the feeling of loving someone dearly or hating someone deeply. But to describe these emotions verbally is almost impossible. Feeling tone always accompanies emotion and may be pleasant or unpleasant to the subject. The differentiation into pleasant and unpleasant furnishes little difficulty. Pleasantness normally accompanies activity in which barriers in the psychological field are being overcome; unpleasantness, activities in which the barriers in the psychological field are being increased. We shall later see that most individuals get occasional gratification out of unpleasantness and occasionally find pleasantness monotonous. By and large, however, the adjusted individual seeks pleasantness and avoids unpleasantness. The feelings of pleasantness and unpleasantness *arise chiefly in activities on the way toward goals.* One of the greatest mistakes of past emotional theory was the supposition that the feelings or emotions arise on arriving at goals or are attributes of goals. Such a view leads to a false belief in the nature of pleasantness and unpleasantness. Some great literary figures, like Goethe, have always realized that the pleasantness was in the striving rather than in the attainment. His great epic of Faust is largely concerned with demonstrating this. Psychologists, however, in their attempts at atomistic analysis were at one time inclined to consider feelings as unrelated to activity. The theoretical assumption that feelings arise with conflict in the psychological field has recently been given a crude experimental verification by Shea.

A-, Hypo-, Hyper-, and Para- Functions of Pleasantness-unpleasantness.—The Greek noun *pathos* means "feeling." By *apathy* we mean, in general, failure to derive marked pleasantness from the successful overcoming of barriers or marked unpleasantness from increase in the number of barriers. The apathetic individual, consequently, neither strives toward goals which most of us would call desirable nor seeks to retreat from goals which most of us would consider undesirable. He suffers from a lack of proper motivation. The feeling of apathy is itself a symptom of this lack of proper motivation, so that the normal conscious concomitants of pleasantness or unpleasantness are lacking. Apathy is really a relative term and actually means diminishment rather than absence of the normal feelings of pleasantness and unpleasantness. Strictly speaking, the term should be "hypopathy." In the cases of a complete apathy, no activity of any sort would occur and the individual would cease to exist. Extreme apathy with regard to the goals of the real social and physical environment is approached in some cases of catatonic schizophrenia. Apathy naturally leads to psychopathology of the cognitive and motor processes in the direction of imperception, retardation of associations, aprosexia, and dearth of ideas on the one hand and toward motor retardation in all its aspects on the other.

Hyperpathy means heightened feelings of pleasantness and unpleasantness with regard to social and physical reality. In itself, it is scarcely to be considered a symptom but rather a characteristic trait of highly sensitive and emotionally reactive personalities. In extreme cases, however, it can be considered a symptom in that it is almost as disabling to the proper social adjustment of the individual as is apathy. So, in cases of the mixed manic-depressive psychosis or agitated depressions, we find a rapidly alternating feeling of pleasantness and unpleasantness which really disables the individual. Hyperpathy naturally leads to psychopathology of the cognitive and motor processes. We find cognitively a tendency to flight of ideas, fluctuations of attention, and motor excitation in the hyperpathetic individual.

Perverse or para- functions of pleasantness and unpleasantness also occur as symptoms. Thus, pleasurable reactions to thwarting or frustration are sometimes found in masochism. Similarly, unpleasurable feelings with regard to successful overcoming of barriers also are found. Cases of these para- functions of pleasantness and unpleasantness, however, are almost invariably concerned

with the more specific emotional reactions of love and hate or fear and rage, and we shall handle them under those headings.

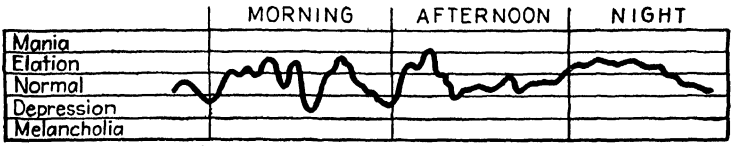
3. Disorders of Mood

Pleasantness and unpleasantness accompany every act, while mood is a more or less persistent attribute of personality. By *mood* we mean the more lasting emotional experience which characterizes the personality in its general reactions. By *elated* mood we mean an abnormal prevalence of feelings of pleasantness in an individual when compared with the average normal. By *depressed* mood we mean an abnormal lack of feeling of pleasantness when compared with the normal average. It is quite normal for all of us to have fluctuations of mood. In general minor fluctuations occur in everyone's day. Some people say, "I always feel good in the morning." Others say, "I am always depressed just before bedtime." Others have daily fluctuations of mood which are rather irregular. Such diurnal variations in mood rarely are extreme enough to be considered psychopathic. Furthermore, most of us have day-to-day or month-to-month elation at times when our objective life situations do not quite warrant them and periods of mild depression when our objective situations are relatively good. In the psychopathology of moods, however, we find these normal swings of feeling highly exaggerated.

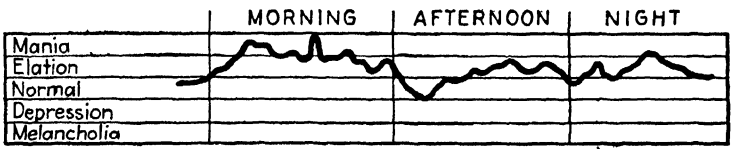
One can differentiate between certain phases of elation and certain phases of depression. We may differentiate mild elation, elation, and euphoria. *Mild elation* is seldom to be called psychopathic unless it occurs in a life situation where it is completely unwarranted. *Elation* in general is the feeling that despite the objective situation everything is very good. Individuals suffering from it are happy, carefree, hyperactive, quite independently of the true objective situation. In *euphoria* we have extreme elation. Individuals are manic in their activity. Everything is not only good; it is perfect. Unlimited sources of energy seem present for activity, and all this has no relationship to the true life situation of the individual.

On the other side of the line we find *mild depressions*, which represent the exact opposite in mood of mild elation, *deep depressions*, in which everything is impossible and nothing in life is worth having, and in the extreme case *suicidal depressions*. Such fluctuations in mood are always accompanied by general feelings of bodily tonus and certain feelings with regard to bodily health. Thus, elated indi-

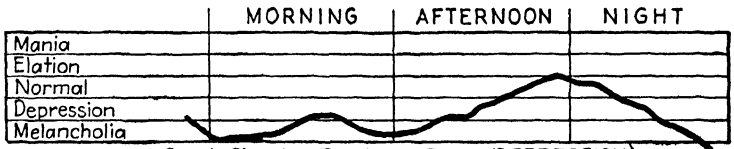
viduals feel fit and fine. Depressed individuals feel sick and low in spirit. They are also accompanied by tendencies to action so that the behavior of elated individuals becomes manic and speeded up with regard to both the cognitive and the motor processes, while in the depressed individual behavior becomes depressive and slowed



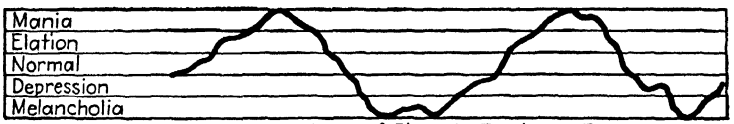
Emotional Range of an Average "NORMAL" Individual on an Average Day



Graph Showing Emotional Excess (ELATION)



Graph Showing Emotional Excess (DEPRESSION)



Graph Showing Alternations of Phase in Emotional Excess

FIG. 6.—Showing normal and abnormal fluctuation of mood.

down with regard to the various cognitive and motor processes. Thus, extreme forms of mood deviation affect the total personality and become specific mental diseases. We call the elated type the "manic phase" of the manic-depressive psychosis, and the depressed type the "depressive phase" of this psychosis. We have discovered that the two phases usually occur in some related form, so that something of the elated mood either precedes or follows the depressed

mood or vice versa. We shall return to the problem of the manic depressive psychosis as a disease in Part IV. In Fig. 6, which is redrawn from Karl Menninger's *The Human Mind*, we have a graphic illustration of normal and abnormal mood fluctuations.

4. Fear and Rage

We come now to the specific emotions. There is a great deal of difficulty in describing the specific emotions. This is again due to the difficulty we have in verbalizing deep-lying and primitive experiences. We shall not enter into the controversy as to exactly how many emotions may be differentiated and how these emotions are related to each other and to the feelings, but rather present the known facts about the distortion of the common emotions which every normal individual experiences. In Part III we shall see that the various nuances of emotion and feeling arise through the differentiation of two basic reaction forms. The one which we shall call here "love," without attempting further differentiation, may be considered that force which impels all behavior connected with tender impulses and preserving and constructing. The other, which we shall call "hate," is the source of all the hostile impulses and all the behavior which is concerned with tearing down and destroying. Just how these basic impulses become modified into what we normally call love and hate, fear, anxiety and rage, sympathy and antipathy, affection and dislike, will only concern us later. For the present we may speak about fear and rage and love and hate separately.

Fear and rage are genetically closely related in that they are alternative emotional responses to threats of injury from the outside physical and social environment. When one is threatened by some social foe or by some physical threat from the environment, one may attempt to flee from it, with accompanying feelings of fear, or attempt to attack it, with the accompanying feelings of rage. Flight and attack are the basic and primitive activities concomitant with the emotions of fear and rage. The process of civilization, however, makes it almost impossible for them to occur in their primitive form and so they usually occur in some attenuated or inhibited form. Thus, fear in civilization most frequently occurs without physical running away from the situation, although, as we shall see, psychological running away is quite common. Similarly, rage usually occurs without actual physical attack, although here, too, psychological forms of attack usually do occur. Both fear and rage are

quite normal and undoubtedly necessary emotional behaviors in the civilized world as we know it today. In some cases, however, they are exhibited in inappropriate or exaggerated forms and as such are to be looked upon as basically maladjustive. We shall deal with each separately.

Fear occurs in many forms. There are *real fears* which arise from an actual threatening situation in the environment. There are equally precise and detailed fears of situations which are not objectively dangerous to the individual. Sometimes individuals suffer from *anxiety*, which is psychologically just as disabling as the more extreme forms of fear but in which the individual really does not know of what he is afraid. Neurotic anxiety is perhaps the most important of all the symptoms in the sphere of emotion for psychopathology. The individual suffering from it feels all the easily discernible and less easily discernible concomitants of fear, which the well-adjusted individual would perceive only on being attacked by a bandit or on realizing that his automobile was about to fall over a cliff. The physiological concomitants of tachycardia (rapid heartbeat), of increased breathing, of tremor, and of sweating of the skin surface, which occur in real fear, likewise characterize these anxieties. In extreme cases they are so severe that the individual is actually unable to continue whatever activity he is engaged in. Furthermore, the anxiety in many cases has no definite object, so that the individual experiences this extreme fear without knowing just what he is afraid of. This form of anxiety is important as a symptom because, as we shall see, theoretically it occurs as a warning signal that repressions are about to break down and unconscious conflicts threatening to become conscious ones. When repressions do break down actual psychosis or psychoneurosis occurs. Consequently, it is present in the prodomal stages of nearly all the psychoses and the psychoneuroses and even if other symptoms do not develop it may be considered a neurosis itself. Extreme forms of such anxiety occur and are known as *panic*, in which the whole social and physical reality is vested with fear and considered a possible source of danger. It is hard for the normal individual to imagine how severely individuals undergoing such panics suffer. In the phenomenon known as *free floating fear*, there is either no perceived stimulus for the anxiety (the individual is afraid but he does not know of what) or the stimulus changes rapidly. An individual may be afraid that his wife is going to die of cancer, and upon being shown

that that is unreasonable he will begin to worry about the stability of the bank in which he has an account, and when this is cleared up he becomes just as afraid that an automobile is going to run him down if he crosses Main Street. Constant worriers, and the world is full of them, suffer from a mild form of free floating fear, and in this way may be said to suffer from mild neuroses. Free floating fear really is simply the chief symptom of the extreme worrier, but like anxiety it represents a symptom of some deep, underlying conflict situation.

When the fear becomes specifically attached to single objects or situations and other objects and situations in the environment are not vested with it, we have what is technically known as a *phobia*. Phobia, then, is a persistent fear of something which is not objectively a source of danger but which the patient reacts to with real fear despite the fact that he realizes this reaction is inappropriate. In this all phobias are closely related to obsessions. Phobias may occur with regard to all possible physical situations, social situations, or objects. Among the best known are:

Acrophobia, fear of high places; agoraphobia, fear of open places; algophobia, fear of pain; anthrophobia, fear of men or of some particular man; botophobia, fear of cellars; claustrophobia, fear of closed places, opposite of agoraphobia; erythrophobia, fear of blushing; gynophobia, fear of women or of some particular woman; hematophobia, fear of blood; nyctophobia, fear of the darkness; pathophobia, fear of disease or of some particular disease (*e.g.*, syphilis); peccatiphobia, fear of sinning; phobophobia, fear of fear, fear that one will be afraid; thanatophobia, fear of death; zoophobia, fear of animals or of some particular animal (often insects).

One should also speak of the a- and hyper- functions of fear because they too may be symptomatic. We have the hyper- function of fear in extreme timidity and lack of courage which characterizes the "Casper Milquetoast" personality whom all of us know. On the other hand we have the a- function of fear in individuals who do not flinch in an actually threatening objective situation. The daredevil, the test pilot, the human fly are often found on psychological investigation to be using bravery to cloak a conflict situation which is connected with fear.

The symptomatology of rage need not concern us in such detail as did the symptomatology of fear. Here again we have the a- functions, which are closely related to timidity and passivity, the hyper- functions, which are closely related to daredevilism and unwarranted bravado, and the para- functions, where objects and

social situations which are no real source of danger to the personality are attacked. The para- functions of rage are undoubtedly closely connected with the para- functions of hate, concerning which we shall speak next. There is no specific nomenclature to refer to the para- functions of rage. However, we have all known extremely cantankerous, choleric individuals who are ready to fly off the handle on the slightest provocation. In the psychoses particularly and in the neuroses to a lesser extent we find para- functions of rage. Particularly in schizophrenic patients we find attacks on the person of other individuals which occur completely without reference to the real situation. Thus, a schizophrenic patient often will strike an attendant or a physician who is only attempting to help him.

5. Love and Hate

By love we mean the emotional concomitant of the urge which leads us into immediate personal contact with individuals. Love may or may not be accompanied by feelings of tenderness. By hate we mean the emotional concomitant of the urge which brings us into hostile personal contact with individuals. Since the most important cause of personality change is to be found in frustration of the love and hate impulses, we shall defer detailed discussion of the abnormalities of love and hate until the chapters on psychiatry, where we shall treat these as definite syndromes. Here, however, for the sake of completeness and to introduce nomenclature necessary for subsequent discussion, we shall list the chief forms of aberration of the love and hate impulses as they have been classified by Bridges:

I. Anomalies of degree.

1. Anesthesia sexualis, sexual frigidity.
2. Hyperesthesia sexualis or eroticism.
   a. Satyriasis in man.
   b. Nymphomania in woman.

II. Qualitative Anomalies (Paresthesia sexualis). It is important in all these cases to distinguish between actual *perversion* and mere *perversity*.

1. Deviations in respect to the sexual object.
   a. Autoeroticism or autosexuality, the sexual object is by preference one's own body. Narcissism or self-love is a partly sublimated form of autosexuality. (*Cf.* the Narcissus Myth.)
   b. Homosexuality or sexual inversion, the sexual object is of the same sex. *There is a contrast between the physical and psychical sex of the subject.*

(*a*) Psychosexual hermaphroditism or bisexuality, the object may be of either sex.

(*b*) Exclusive selection of the same sex.

(*c*) The whole mental make-up may become that of the opposite sex in harmony with the sexual feeling. This is called *effemination* in man, *viraginity* in woman.

(*d*) The form of the body may also approach that of the opposite sex. This is known as *androgyny* in man, *gynandry* in woman.

c. Bestiality or zooerasty, the sexual object is an animal.

d. Pedophilia erotica (*e. g.*, pederasty), the sexual object is an immature child.

e. Necrophilia, the sexual object is a cadaver.

2. Deviations in respect to the sexual aim.

a. Deviations in aim dependent upon "overvaluation" of the sexual object. Certain aspects or associates of the love object have an intense, biologically unwarranted emotional appeal.

(*a*) Anatomical transgressions, utilization of some part of the body other than that intended for the sexual union.

(*b*) Fetichism, deviation of the sexual aim because of the substitution of an associated object for the real sexual object, *e. g.*, foot, hair, glove, shoe, handkerchief, lingerie, etc.

b. Deviation in aim due to overvaluation of the "forepleasures." There is fixation of the precursory or preparatory sexual aims such as looking and touching. The most frequent abnormalities here are *active* and *passive exhibitionism.*

c. Algolagnia, the exaggeration of the little understood *pain-cruelty component* of the sexual impulse.

(*a*) Active algolagnia or *sadism* is the gratification of sexual desire by inflicting pain.

(*b*) Passive algolagnia or *masochism* is the gratification of the sexual instinct by suffering pain.

In both cases the pain may be physical resulting in the *mutilation* of the victim or the subject; or psychical resulting in the so-called "*symbolic*" sadism or masochism. Both active and passive algolagnia are usually found in the same subject with one or the other more strongly developed, and they are often combined with perversions in respect to the object.

III. Paradoxia sexualis, sexual instinct manifested outside of the period of anatomico-physiological processes in the generative organs.

1. Premature development of the instinct, resulting in sex manifestations beyond the age of the child.

2. In old age, especially in dementia senilis, there is often a reawakening of sexual libido accompanied by impotence and consequent perverted

acts.) [From J. W. Bridges, *An Outline of Abnormal Psychology*, R. G. Adams and Company, Columbus, Ohio, 1921, pp. 82–83.]

6. Return to Case in Way of Summary

On psychiatric investigation deep-seated emotional maladjustment was found to underlie all of Mr. X's cognitive and motor symptoms. He had had a long history of anxiety about his inventions and the possibility of colleagues stealing them which turned into a panic when he originally announced, "They are going to get me." His obsession about electrical machines was linked to a phobia for electricity. He had suffered before the actual outbreak of his psychosis alternate moods of elation in which everything seemed better than it actually was and others of depression in which everything seemed worse. He became completely impotent during his psychosis. Psychoanalytic investigation showed that all the symptoms of his illness were created by emotional frustrations of his early childhood. But we are getting ahead of the story. In the next chapter we shall begin our discussion of the genotypic or dynamic factors underlying all symptoms.

Bibliographical Note

For general works *cf.* the bibliographical note at the end of Chap. V. The problem of the classification and verbal description of emotions remains unsolved. A good recent philosophically oriented review is that of Nahm. A good recent review from the more strictly experimental standpoint is that of W. A. Hunt. Ruckmick's recent book gives a good survey of the whole field.

PART III

THE THEORY OF PERSONALITY STRUCTURE AND GENESIS

CHAPTER VIII

THE METHODOLOGICAL BASIS OF PSYCHODYNAMIC THEORY

1. Field Theory

Now that we have surveyed the various ways in which psychic mechanisms become maladjusted and have learned the names for these, we may return to the more basic problem of psychodynamics. As we have repeatedly pointed out, symptoms are surface phenomena which are related to underlying dynamic factors. This distinction between symptom and underlying dynamic situation may be looked upon as a particular example of the distinction between phenotypical and genotypical descriptions in science. Part II on symptomatology gave the phenotypical description of the various abnormalities of mental processes. Part III will develop the genotypical description of the processes underlying symptoms. In so doing, it presents the most important discoveries of modern psychopathology. Before we go on to the details of these, we shall review briefly the trend we find in all the sciences to move from the descriptive classification of facts (phenotypes) to the understanding of the underlying dynamic situation (genotypes). To do this will help us understand both the nature and the importance of the new discoveries.

Science must start out with description and classification of facts. Facts once classified and described are then subjected to theoretical analysis and further experiment, and science tends to become explanatory and to be able to make predictions about future facts. Such sciences become systematized. We by no means imply that science can be divided into two distinct realms of endeavor or that every scientist is to be called either a classifier or a systematizer. Rather, the process is one of gradual transition. Practically all Greek science was concerned with classification, but even among the Greeks the laws of that branch of mechanics which we call "statics" were discovered. The science of the Middle Ages was again largely a science of classificatory description on a theological rather than a scientific basis. The emergence of the Galilean and Newtonian

mechanics marked the first time in history when any science developed on a completely systematized dynamic basis. In the three hundred years after Galileo, all of physics was finally put on a systematized dynamic basis. This does not mean that, even today, descriptive classification is unnecessary in physics; and some of the physical sciences are much more systematized than others. For instance, physics itself, which might be thought of as the "physiology" of matter, is almost completely systematized, while chemistry is still much concerned with classification. In the biological sciences, particularly psychology and sociology, it is only very recently that the first beginnings of systematized dynamic science have been established. In the field of biology, Darwin gave us the first general hypothesis from which the dynamic order in biological nature could be understood. In the field of psychology, Sigmund Freud was the first individual to accomplish a fairly complete systematic dynamic theory of human behavior. Although neither the Darwinian nor the Freudian hypotheses are as completely systematized as are physical theories, they tend in the same direction.

The whole trend of modern psychological science historically mirrors the development of modern physics. This should by no means be taken to imply that psychologists are today concerned with a description of psychological processes in physical terms. It means rather that the mode of thinking about psychological processes tends to assume the *form* of modern physical thinking. Probably the chief characteristic of modern physical science is its use of constructed mathematical theory. Such theoretical constructions as those of the force of gravity, the electromagnetic field, the kinetic theory of heat all represent devices which physicists invent in order to correlate and systematize those facts they have observed. No one has ever seen the force of gravity, but, by positing it and observing actual movements, many of the problems of mechanics become coordinated and explained. Similarly, the electromagnetic field, although not directly observable, is a postulate which allows us to understand the various deflections of magnetic needles which are observable.

The impatient student may ask, "What has all this to do with psychology?" It has a great deal to do with it. Modern biological science tends to use such constructed theory (although it may or may not be mathematical) in the general manner of physics. Thus in biology, we have concepts like "instinct," "tropism," and "gradient." In psychology, concepts like "urge," "association," and

"Gestalt" all represent theoretical constructs which are used to help us understand observed behavior.[1] Psychopathological theory has developed a particular set of such constructs as "libido," "unconscious," "superego," and the like. These are used in psychology as the concept of gravity is used in physics. No one has ever seen or felt the libido or the superego, but we see their workings on every side. This section of our work will be largely concerned with introducing such concepts and showing how they coordinate and explain symptoms. Whether or not these particular constructs are the best which may be made will be left an open question until after their presentation.

Concurrent with the development of genotypical descriptions and the use of constructed theory, certain other differences occur as science progresses. If one characterizes the simplest and earliest types of science as being "class-theoretical" one can say that the most complex and systematized sciences are "field-theoretical." This distinction is useful in evaluating the development of any science. In another connection, the author (1936*c*) attempted to set up certain criteria to distinguish between the class-theoretical and the field-theoretical modes of attack. It may help the reader to understand both the differences and the similarities in these two modes of attack if we insert here a brief account of these criteria.[2] To illustrate them, we shall compare Aristotle's treatment of kinetics (*i.e.*, the science of the movement of bodies) with the modern physical theory. Aristotle's treatment of this subject is purely class-theoretical. The modern treatment is purely field-theoretical.

Criteria for Class Theory	Criteria for Field Theory
1. The behavior of objects is determined by the "class" to which they belong.	1. The behavior of objects is determined by the structure of the "field" of which they are a part.

In a "class" theory, the characteristics of behavior common to different individuals of a class are abstracted. If the behavior of another individual shows these characteristics, it is included in the class, and the behavior is

[1] The question of the methodological adequacy of these constructs cannot be enlarged on here. One of the most important theoretical strivings in modern psychology has been the attempt of some psychologists to develop such theoretical concepts which will also be mathematically stringent. *Cf.* Lewin (1936, 1938), Tolman, Hull, Brown (1936*c*).

[2] The distinction class-theoretical versus field-theoretical was first set up by the author (1934). In making the distinction, he was much influenced by Lewin (1935), who in turn was influenced by Cassirer.

then regarded as explained. In explaining an event in a "field" theory, the structure of the field is characterized in terms of laws, which we shall see are logical constructs. If the behavior of the object follows these laws, it is said to be explained. Following Lewin, we shall elucidate our criteria with examples from Aristotle's kinetics and the modern physical treatment of the same topic. Aristotle's kinetics depend on his chemistry. Earth, water, air, fire, and ether have their "rightful" positions in this order from the center of the cosmos outward. Whether an object moves upward or downward depends on the direction from which it has been removed from its "rightful" place. If fire is generated on the surface of the earth, it represents a displacement and it moves upward because it belongs to the class fire. A stone thrown into the air, belonging as it does to the class earth, returns downward.

According to the modern physicist, bodies fall in a direction and at a rate which is determined in final analysis by the spatial-temporal distribution of bodies in the cosmos or (if we insist on an up-to-the-minute description) by the structure of the space-time manifold. When this structure is characterized, the direction and rate of movement can be deduced in terms of a logical necessity. In general, the behavior of objects within a field may depend also on the character of the objects themselves. This is strikingly so of the behavior of objects in the electromagnetic field. The microscopic field structure of the objects, however, may enable us to deduce these characteristics.

2. The force directing behavior shows the properties of an entelechy.	2. The force directing behavior shows the properties of a vector.

Bodies move, according to Aristotle, because each harbors an "entelechy" which strives to return the body to its "rightful" place. The entelechy, as Lewin pointed out, is in itself determined by the class to which an object belongs. In modern kinetics, the movement is defined by a vector whose direction and magnitude at any place are both determined by field structure. A stone without a field, according to field theory, would not behave at all; according to class theory, it would presumably start looking for other stones.

3. There is local determination.	3. There is no local determination.

The return of the stone to the earth is determined "in" the stone according to Aristotle. Outside or accidental forces displace the stone, then the entelechy begins to act and it strives to return to its rightful place. In modern kinetics, there is no local determination. This should be clear from the above.

4. The concepts used in class theory are primarily substantial.	4. The concepts used in field theory are primarily functional.

Aristotle's analysis is concerned with the substance of which the object is made. The substance of which the object is made is a matter of complete indifference to the field theorist.

5. The method of scientific analysis is primarily structural.	5. The method of scientific analysis is primarily functional (relational).

The problem for the Aristotelian physicist to determine is of what the object is made. If it is a stone, then it is earth, and when thrown in the air moves downward. Modern kinetics was developed by varying the conditions under which movement occurs. The modern physicist always expresses his analysis in series of relationships.

6. The analysis is in terms of historically and geographically conditioned regularities.	6. The analysis is in terms of ahistorical-typical laws.

Statements about falling bodies in modern kinetics are statements about *types* of events which hold throughout space and time. They are statements about logical constructs which physicists have postulated as underlying the given immediate experience. The field theorist *orders* his experiences to these logical constructs. Insofar as his phenotypical experiences may be so ordered to these genotypical constructs that he may deduce what his subsequent experiences will be, he considers his scientific analysis successful. The relationship between time and space expressed in the law of falling bodies, although never agreeing precisely with actual data, presumably holds for all past and future historical times and for all positions in the cosmos. Explanation of an event consists in adequately describing the underlying genotype and in seeing if the phenotype (experience or data) may be precisely *ordered* to it. Laws are descriptions of genotypes.

It is here that field theory enjoys the greatest advantage over class theory. When the laws (genotypes, underlying dynamics) are well enough known to allow measurement, one can predict the future quite independently of the past. That the climate of the past, soil erosion in past years, the data of the spring thaw, etc., all have some part in determining the time at which an individual apple will fall is obvious. But the contemporary physicist, if he could make certain measurements, could predict the fall of the apple and the place it would land with a high degree of accuracy quite without reference to its past history. He might characterize the fall with a single vector. He needs no knowledge of the history of the tree. The fact that there are many contradictory theories of cosmic evolution is a matter of indifference to the physicist. The psychologist always excuses his lack of precision by referring to the difficulties of a genetic nature which hamper him.

7. The method is primarily empirical.	7. The method is hypothetico-deductive.

This point is closely related to the foregoing. Aristotle's descriptions fitted his experiences fairly accurately. His experience (without control or verification through the experimental method) dictated his theories. Perusal of Galileo's *Discoursi* convinces one that Galileo deduced the relationship between time and space before he performed his justly famous critical experiments on the inclined plane. In field-theoretical analyses all experiments are critical, *i.e.*, they are performed to test the validity of rather precise working hypotheses. The hypotheses themselves require an adequate definition in terms of the original concepts and the experimental situation must be adequate to decide on the validity of the hypotheses. Working hypotheses then precede experimentation.

8. The analysis allows dichotomies.	8. The analysis allows no dichotomies.

Only in the sphere of the ether are absolutely regular laws to be found, according to Aristotle. The only laws which brook no exceptions are those of astrophysics. In the theory of the gravitational field, on the other hand, there is no essential difference between events on the earth and events on the moon.

9. Class theory tends to use valuative concepts.	9. Field theory insists on nonvaluative concepts.

Movements in the ether were on a "higher" plane (*i.e.*, showed perfection), while movement on the earth was "imperfect" according to Aristotle. The approach of modern science, as has been pointed out time and time again, is concerned with neither the good nor the bad, neither the beautiful nor the ugly.

10. Class theory attempts to answer a metaphysical "why?"	10. Field theory attempts to answer a scientific "how?"

Aristotle was trying to answer the question: "Why do bodies move?" Galileo, the first thinker in the field-theoretical tradition, attempted the more modest question: "How do bodies move?" I believe it could be shown that the question "why?" as posed by Aristotle must imply a metaphysical answer. Whenever one poses questions like "why movement?" "why life?" "why love?" one must begin to think in terms of animism or class theory. To a certain extent, field theories also answer the question "why?" but it is a different sort of "why?" It is, I believe, synonymous with "how?" Field theory, as we have seen above, shows the logical necessity of connection between events by ordering phenotypical or observed data to genotypical constructs. Science never explains why nature is the way it is, but simply relates certain events to others in

terms of logical necessity. It does not even answer *why* they should be related at all, but simply shows *how* they are related. Explanation in science is description in a language which allows us to derive certain necessary implications from certain concrete cases. [From J. F. Brown, *Psychology and the Social Order*, McGraw-Hill Book Company, Inc., New York, 1936, pp. 35–41. Certain paragraphs giving sociological examples of the two types of attack are omitted.]

At the present time, psychopathology is making the transition from class theory to field theory. The nineteenth century established descriptive symptomatology (as we studied it in Part II), while the twentieth century has developed psychodynamic theory. It would be nonsense to claim that even the most modern of the psychodynamic theories are stringent and precise in the sense that modern physical theories are. Of course they are not. But modern psychopathology is following the same general methodological principles in its development.

In the development of the field-theoretical approach in all sciences rival sets of theoretical constructs always appear. Thus, in the history of physics, we have the famous debates between the adherents of the Ptolomaic and those of the Copernican viewpoint in astronomy, between the followers of Huyghens and those of Newton concerning the nature of light, and recently between the adherents of Einstein and the Classicists concerning space-time. Today in psychology and psychopathology we have several rival schools. We shall present the chief tenets of each of these in the following chapters. But even among these rival schools there are very important general principles on which all schools agree and these must be presented first.

2. Points on Which All Modern Dynamic Theories Agree

1. All the important modern theories agree that the personality is to be understood as a pattern or Gestalt of personality traits. These traits develop out of the biological constitution through activity in the environment. In other words, they all agree that we must consider, not an organism versus an environment, nor the organism and the environment, but rather an organism *in* an environment. As we pointed out as early as the first chapter, the psychological field includes the organism and the environment in one descriptive unit. In this sense all modern psychodynamic theories follow the basic demands of field theory. There is some disagreement as to how

much change in personality may be effected by changes in the environment. Just what is biologically, just what is psychologically, and just what is socially conditioned is still the subject matter for debate. There is particularly disagreement as to the weight which is to be given social factors. However, no theory completely neglects the social aspects in accounting for personality genesis and both normal and abnormal behaviors. They all agree that the problem is basically a *socio-psycho-biological* one. Such treatment of the organism and environment as essential parts of the psychobiological field leads to certain definite implications for the heredity and environment problem which we touched on in the first chapter. Today most psychologists see the problem not as heredity versus environment, but as heredity and environment as always-present factors whose relative importance depends on the nature of the whole psychological field.

2. All modern theories are inclined to look on the organism as a supersummative whole, or as a whole which is something more than the sum of its parts. By a supersummative whole we mean an organized totality in which change in any of the parts effects changes in all the parts. Such totalities are technically known as *Gestalten*, and modern research in some fields has discovered a great deal about them. Change in any of the parts changes the nature of the total configuration. From this view, of course, sickness is a psychobiological restructurization of the parts in the attempt to achieve a reorganized totality. The difference between life and death is probably best accounted for by defining the living organism as a supersummative whole, while the dead organism is simply an aggregate. Consequently, the most important subject for investigation by psychologists who are interested in problems of total behavior is the problem of the structure of the personality. We shall have a great deal more to say about this in the succeeding chapters. Considering personality as a supersummative whole also fulfills the demands of field theory.

3. Not only is the normal adult organism a structured whole, but every organism from birth to death is a structured whole. Growth and personality genesis, then, become matters of restructurization or differentiation. This view is opposed to the mechanistic viewpoint prevalent in the nineteenth century. The older viewpoint considered organization to be achieved through the process of adding together originally independent parts. The mentally ill individual is

not to be considered as lacking in one of the parts or as having the parts improperly connected but rather as a Gestalt undergoing restructurization. This viewpoint has theoretical importance for psychodynamic theory as well as practical importance for psychotherapy. The newborn babe was considered largely a bundle of independent sensations and reflexes, which in the process of personality development somehow got connected with each other. This older viewpoint was also inclined to view the mentally disordered individual as disordered in simply one or some of the parts. Consequently the nineteenth century put emphasis on the study of the isolated symptom and the symptomatic cure. Today we view the child not as an incomplete, uncoordinated adult but as a structurally different organism from the adult. The child is also an organized whole, but the structure of his personality differs from that of the adult. There are good experimental reasons for believing this from the field of embryology, neurology, physiology, and normal psychology and psychopathology.

4. All modern theories invent theoretical constructs in order to arrive at a systematized science. It is increasingly clear that these constructs play the same role in psychology as mathematical theories do in the physical sciences. There is, to be sure, a considerable difference in the logical and methodological adequacy of these various constructs. But by increasing the use of theoretical constructs modern psychodynamics is becoming field-theoretical.

5. All theories posit some dynamic force to account for activity. This means that all schools are in agreement on the importance of the problem of motivation. Some theories, again, derive the motivating force more on a biological basis; others on a more sociopsychological basis; but all agree that both sides of the problem are involved. Thus the posited motivating forces imply the idea of vectors and so fulfill a demand of field theory.

6. All the modern theories agree that certain of the motivating forces become blocked by social or physical barriers. Frustration is the resultant of this. The reaction to frustration becomes the chief factor in determining personality differentiation and restructurization.

7. All theories agree that symptoms have a cause, a significance, and an economy. We have seen the importance of this in Part II.

8. All theories agree that some of the sources of motivation are unknown to the subject in his normal waking state and are thus

unconscious. We shall see the significance of this in this and the following chapters.

Such widespread agreement on first principles leads to the eventual possibility of solving problems of personality growth and genesis on a sound scientific basis. There are many disagreements on the exact importance of this or that dynamic force or the exact function of this or that frustration. We shall see many of these disagreements in the course of the next few chapters, but our general picture of the human personality as an organized whole behaving in a structured socio-psycho-biological field bears so many of the earmarks of sound scientific theory that we can be very optimistic about the results of further research.

3. Interpersonal Relations and the Social Field

So much of education and psychology has been concerned with the cognitive aspect of the personality (*cf.* Chap. V) that even professional psychologists have been inclined to ignore the biological and social foundations of personality. From the older viewpoint that man is an animal whose biological body may be governed by a rational soul or mind, we have come to the more modern viewpoint that man is an animal whose biological body determines the nature of his mind. We must not forget that man is an animal, biologically and intimately connected with the subhuman species. At birth, his biological components are very much more obvious than his psychological ones. Man's mind develops through adaptation of biological urges to the environment. This environment from birth to death is a social one. Man is born psychologically undifferentiated and he gains his psychological differentiations in the social group. But his first real activity is nursing at his mother's breast and so is a social one. This fact is so homely that scientific psychology has ignored it until very recently.

Man's first physical goal (taking nourishment) is practically indistinguishable from his first social goal (love for his mother). The blocked-goal situation (*cf.* Chap. I) is the basic situation in which personality has its genesis. The goals for which men strive and the barriers which prevent them from arriving at all their goals are both physical and social in nature. Physical goals are, of course, such things as economic goods and physical barriers are such obstacles as walls and forests. Prestige and love are social goals, while laws and customs are barriers. Blocked-goal situations where the goal

and the barrier are both physical have been more often studied by psychologists than such situations where the barriers and goals are social. This has been a mistake. Until recently, psychologists have failed to emphasize the importance of social goals and interpersonal relationships. One of the greatest services of Sigmund Freud was his careful examination of the earliest interpersonal relationships. Since Freud's pioneer work, personality theory has been necessarily concerned more with social goals and social barriers than with physical goals and barriers. Freud pointed out:

> The contrast between Individual Psychology and Social or Group Psychology, which at a first glance may seem to be full of significance, loses a great deal of its sharpness when it is examined more closely. It is true that Individual Psychology is concerned with the individual man and explores the paths by which he seeks to find satisfaction for his instincts; but only rarely and under certain exceptional conditions is Individual Psychology in a position to disregard the relations of this individual to others. In the individual's mental life someone else is invariably involved, as a model, as an object, as a helper, as an opponent, and so from the very first Individual Psychology is at the same time Social Psychology as well—in this extended but entirely justifiable sense of the words. [From S. Freud, *Group Psychology and Analysis of the Ego*, International Psychoanalytical Library, London, 1922, pp. 1–2.]

From the very earliest time, the individual is in a social environment, and, once his physical needs are taken care of, he develops sociopsychological needs in relationship to some other individual. A basic sociopsychological problem is that of the relationship between two individuals.

The interpersonal relationships of two individuals is not the only thing important in the development of the personality. Political and economic factors, on the one hand, and physical factors of the environment, on the other, enter in to mold it. But the personality starts its development in the mother-child relationship. It is through this relationship that the individual becomes civilized and a member of society at all. If the thesis is true that personality develops through frustration, then the child, primitive and uncivilized, becomes the normal civilized adult primarily through the frustration of interpersonal relationships. It should be quite clear that the basic physical needs of the human being may not be frustrated or may be frustrated only to a certain extent. For instance,

complete frustration of the need for food would develop into the loss of the individual life, and, consequently, society cannot civilize its members by starving them. It may, however, frustrate the interpersonal relationships and, as everyone knows, society does so from the infant's birth. Consequently, we become civilized as our personalities differentiate through the process of social frustration. This is the basic discovery of the theory of psychoanalysis to which we now turn.

4. Psychoanalytical Theory as a Type of Field Theory

Of the various theories concerning the detailed nature of the structure of the personality and the structure of the psychological field that of psychoanalysis is the most systematic and the most worthy of more detailed consideration. There are many points in the theory which need methodological clarification. Its founder, Freud, was primarily a medical practitioner rather than a theoretical scientist. Undoubtedly much of what he said will undergo modification of form and some of what he said will undergo modification of content as the science of psychodynamics advances. But this is certain: Modern psychopathology owes more to Sigmund Freud than to any other one man. The next three chapters will attempt to develop the basic points of the Freudian theory of psychoanalysis as it is at present constituted. We shall reserve criticism until the end of the positive exposition, because the author has found that the student gets a better grasp of the Freudian system when it is presented positively. After this positive presentation we shall attempt to see some of its shortcomings and compare it with certain rival theories of personality genesis.

5. Summary

1. Classificatory science based on phenotypical descriptions (symptomatology, the subject matter of Part II) tends to grow into systematic science based on genotypical descriptions (psychodynamic theory, the subject matter of Part III). Systematic science is field-theoretical. Modern psychopathology tends to be field-theoretical.

2. As all sciences become systematized there is the tendency for various rival theories to appear. Despite the various rival theories of psychopathology, all of these agree on certain very important fundamental points. These are listed.

3. The most important barriers leading to personality change within the psychological field are the social frustrations of interpersonal relationships.

4. Freud first established the importance of these and was able to develop the first systematic theory of personality genesis.

BIBLIOGRAPHICAL NOTE

For the distinction between class theory and field theory see Lewin (1935), Bentley, von Bertalanffy, Brown (1934, 1936, 1936*c*). That the social frustrations of interpersonal relationships are of particular importance in personality genesis has been indicated in all the work of the psychoanalysts, which will concern us in the next chapters. This viewpoint is also well expressed by Sullivan (1938). Freud's *Autobiography* (1935), his *History of the Psychoanalytic Movement* (1917), and *Introductory Lectures* (1920), all deal with his establishment of psychoanalytic theory. *Cf.* also the works of Wittels, Zweig, Winkler and Bromberg. That psychoanalysis may be looked on as a type of field theory is argued by the author (1940) and Alexander (1940).

CHAPTER IX

PSYCHOANALYSIS: BASIC POSTULATES; THEORY OF PERSONALITY STRUCTURE

1. The History of Psychoanalysis

We have already seen (Chapter II) how Sigmund Freud developed a dynamic theory to account for the interrelationships between hysteria and hypnosis late in the nineteenth century. He developed this theory on the basis of a therapeutic technique. He found that, if he could get the conscious part of the personality of the hysteric to accept the conflict which had led to the repression into unconsciousness of one of the conflicting urges, the symptoms of hysteria disappeared. Psychoanalysis, which this method was called, started as a specific technique for the treatment of one of the psychoneuroses. From this very modest beginning psychoanalysis has developed into the most systematized theory of psychological behavior which we possess and undoubtedly into the most successful therapy which we have for some of the basic mental disorders. The idea of the relationship between hysteria and hypnosis had been established by Charcot and Bernheim. Freud had the early collaboration of Joseph Breuer and knew his cathartic theory. But the important initial researches in psychoanalysis proper were all done by Freud alone. It soon became obvious that the Freudian psychoanalysis had very important implications not only for psychopathology but for the most varied medical problems on the one hand and for sociological and anthropological problems on the other. Freud soon found himself the center of an earnest group of researchers who were destined to develop modern psychoanalysis. After the psychoanalysts had found that some of the psychoneuroses were amenable to psychoanalytical treatment and had developed an etiological theory to account for them, they found that psychoneuroses, the psychoses, the so-called "psychopathic character disorders," and the sexual perversions were related phenomena. They further found that these various behavior maladjustments resulted chiefly from experiences

in the earliest years of life. They were also able to show that all these maladjustments were simply exaggerations or perversions of the so-called "normal" mental mechanisms. Finally they were able to demonstrate that phenomena which all of us experience, such as dreams and the mistakes of everyday life, were related to more severe forms of behavior maladjustment.

All these discoveries did not happen overnight, of course. The first communication on hysteria which Freud did in collaboration with Joseph Breuer was published in 1893. Freud was still publishing in the year of his death, 1939. His major contributions thus cover a period of close to fifty years. In the following lines a few of the landmarks in the history of Freud's scientific career are outlined. Those technical terms which are still strange to the reader will be developed in detail in this and the following chapters.

1856. Freud was born of Jewish parentage in Freiberg, Moravia. The family moved to Vienna in 1860, where Freud spent his childhood, was educated, and lived most of his life.

1873. Freud entered the University of Vienna, where he studied medicine and worked as an assistant to the great physiologist Brücke.

1881. Freud was graduated from the university and entered the general hospital in Vienna, where he worked chiefly in neurology and published many valuable neurological papers.

1885. He studied neurology with Charcot in Paris, returning to private practice in Vienna in 1886.

1893. Preliminary publication of the *Psychic Mechanisms of Hysterical Phenomena*, with Joseph Breuer.

1895. *Studies in Hysteria* with Breuer. In the period from 1890–1895 Freud had seen and treated many hysterics. In this period he gave up the traumata theory and the cathartic therapy which had originated with Breuer and developed the basis for psychoanalysis proper. Breuer ceased collaboration with Freud shortly after this time but they remained on friendly terms until Breuer's death.

1900. Publication of *The Interpretation of Dreams*, in which the psychoanalytic theory of dreams was elucidated. This will concern us in Chap. XI.

1904. Publication of *Psychopathology of Everyday Life*, which elucidates the psychoanalytic theory of lapses which we shall develop in Chap. XI.

1905. Publication of *Three Contributions to the Theory of Sex*, the exposition of the theory of psychosexual genesis, which will concern us in Chap. X.

1905–1909. Various technical medical papers on psychoanalytic theory and the neuroses.

1909. Visit to Clark University and introduction of psychoanalysis to America. These lectures were the first popular presentations of psychoanalytic theory.

1910. The first International Psychoanalytic Congress was held in Nuremberg.

1915. Publication of *The Unconscious*, containing the most important discussion of the nature of the unconscious, which will concern us in this chapter.

1918. Publication of *Introduction to Psychoanalysis* in German.

1920. Publication of *Beyond the Pleasure Principle* which introduces the idea of the death instinct and will concern us in this chapter.

1923. Publication of *The Ego and the Id*, which gives the psychoanalytic theory of the structure of the personality and which will concern us in this chapter, and of *The Problem of Anxiety*, which gives his final theory of the role of anxiety in the neuroses.

1925–1939. Freud continued many publications in the field of medical psychology but his most important works, *The Future of an Illusion*, *Civilization and Its Discontents*, *Moses and Monotheism*, were concerned with sociology and social philosophy. He died in London in 1939.

Through this whole period, like any healthy, growing science, the basic framework of Freudian psychoanalysis has changed several times. One of the chief defects of most textbook presentations is that usually only the earlier and less complete forms are given. We shall attempt in this book to present the theory as it is today.

After 1900, Freud had many disciples scattered through Central Europe and, after 1911, disciples throughout the world. Among these were the psychoanalysts C. G. Jung and Alfred Adler, who later introduced decided modifications into the psychoanalytic theory and left the main movement. It has gradually established itself all over the civilized world. Among others who discovered important psychoanalytic facts and introduced new theoretical constructions we may mention Abraham, Ferenczi, Alexander, Deutsch, and Reik. Freud's psychoanalysis was brought to the United States by G. Stanley Hall and Professor Putnam of Harvard. It was also furthered in this country by the New York physician A. A. Brill. Ernest Jones was most important in establishing the theory in England.

Today we have some hundreds of qualified psychoanalysts in the world, an International Psychoanalytical Society with its own press, national psychoanalytical societies in all the chief civilized countries,

and a considerable number of journals devoted solely to the publication of psychoanalytical articles.[1]

Psychoanalysis today may be said to be the leading theoretical school of personality research in both its normal and abnormal phases. The term "psychoanalysis" today has at least three meanings. It is, in the first place, a technique which investigates the dynamics of the unconscious and conscious mental life of the individual. By dynamics in this sense we mean the distribution and change in distribution of psychic forces. Through an investigation of the mental life of the individual it is often possible to manipulate the psychic forces so that a restructurization of the personality ensues. So psychoanalysis is, secondly, a form of psychotherapy which attempts to restructure the neurotic or psychotic or perverse or psychopathic character so that he may make a better and happier adjustment to his life's problems. From the use of the technique of psychoanalysis as a therapy has grown a series of important and systematized theoretical constructions. Psychoanalysis is thus, in the third place, a system or school of psychology. It is in this third sense that we shall be chiefly concerned with psychoanalysis in these chapters. As a systematic psychology, psychoanalysis has implications not only for the "abnormal" but also for the "normal" adult of our society. The psychoanalysts have also investigated the psychology of primitive peoples, the psychology of aesthetics, the psychology of religion, and many problems in child psychology and social psychology. In this book we shall have but little to say about such investigations and shall be concerned with the technique and therapeutic aspects of psychoanalysis only incidentally. The technique of psychoanalysis and its application to therapy cannot be taught in a book. To attain proficiency in these matters requires years of specialized training by recognized teachers. We shall return to the problem of psychoanalysis as a technique in Part IV and have something to say about the implications of psychoanalysis for social sciences in Chap. XII. Our central problem now will be the elucidation of psychoanalysis as a system of psychology.

[1] The rise of fascism has unfortunately hindered the development of the psychoanalytic movement in Central Europe. Particularly since the death of Freud, America has become the center of psychoanalysis. *Cf.* Alexander (1938).

2. Basic Postulates of Psychoanalysis

Theory of the Basic Urges.—By the basic postulates of a science we mean the theoretical constructs which are the starting points for the systematic ordering of the facts of a science. In a healthy systematic science fact or data and theory or construct are integrated in a hand-in-glove fashion. A few factual observations become accounted for by a theory or hypothesis, and this theory in turn suggests where new facts may be gathered. Psychoanalysis has always shown such a close coordination of theory and fact. It has uncovered a vast array of facts which are quite valid independent of the fate of its theories. These facts, however, would scarcely have been discovered without the theories. In this chapter we shall present the basic postulates which will be used to account for the facts of personality genesis to be presented in the next chapter. The reader is warned, however, that certain facts will also be found in this chapter and certain theories in the next.

Since Freud was a biological scientist writing at the end of the nineteenth century, it was natural for him to take over some of the instinct biology of his times. The first important psychoanalytic postulation is that of biologically conditioned instincts, drives, or urges. It is necessary to mention instinct, drive, and urges because the Freudian conception of "instinct" *i.e.*, *Trieb*, falls somewhere between the English "instinct" and "drive" and is probably best translated by the word "urge." Since Freud himself usually uses the term "instinct" and since his usage has been followed, we must also use the term. The reader is asked to keep in mind the exact connotation. We shall see later that the postulation of such instincts can be criticized on methodological grounds, but for the present let us see what Freud said about them. According to him, man has acquired, somewhere in his phylogenetic history, certain innate unlearned strivings or urges or instincts. Freud's instincts are not synonymous with the specific instincts of the animal psychologists in that they are not connected with specific environmental goals. They are rather postulated basic psychic energies which are innate and unlearned. Whatever the individual is or does at any particular time is determined by these urges working through the existing structure of his personality in his environment. The only reason that we behave at all is because of the motivating force of urges. These urges are modified, to be sure, by the life experiences of the

individual, particularly those of the earliest years of life, but in their essence they remain biologically determined. Since these urges of a biological nature underlie all that an individual does and thinks about, *biological and psychological development are inseparably interconnected.* The force and direction of the urge are modified by experience, but in their simplest form they are a part of the hereditary constitution. Consequently, psychoanalysis believes in variance in the biological constitution of individuals. This is mentioned because critics from the somatogenic school have falsely attributed to psychoanalysts acceptance of a naïve psychogenic standpoint. The modifications in the force and direction of the instinctual urges are, to be sure, brought about in a social environment. But Freud has never considered all behavior to be psychologically conditioned. Rather, from the first, he has always spoken in terms of what might be called socio-psycho-biology.

According to Freud, there are two basic instincts or urges. In his earlier work, he made most of the instinct of Eros,[1] the life instinct, or love instinct, as he also calls it. Consequently, his earlier writings gave rise to the widespread conception that Freud said everything was due to sex. It is true that the *eros*, or life instinct, is the source of sexual behavior in the wide meaning which Freud gave to the term "sex." The energy of the life instinct which finds its outlet in bringing people into close physical contact is called the *libido*. The libido often is, but should not be, confused with the life instinct of which it is a part. The life instinct is also the source of all the forces which impel us to build up, to construct, to preserve ourselves and the species. Thus the building of houses or the taking of nourishment are as much to be derived from the instinct of Eros as is the sexual life. By the sexual life, as we shall see in the next chapter, Freud means not only what is popularly defined as sex, *i.e.*, adult normal heterosexual relationship, but all the behavior between human beings in which they come in close physical contact. Hence, under the concept of the life instinct, Freud subsumes the chief instincts of the nineteenth century biologists, namely, the instincts for self and for race preservation. Physiologically, the life instinct may be thought of as the fundamental tendency to maintain the individual organism and cause it to grow. Psychologically, it leads to the sexual impulses and the preservative impulses, which include besides food taking all the activities which we perform to preserve

[1] Poetically so-called after the Greek god of love.

our bodies from the physical environment, such as building houses and making clothes. It also is the psychological source of all creative intellectual activity.

In his later investigations (after 1919), Freud discovered that human beings were not only basically constructive, preservative, and motivated by the life instinct, but that, under some circumstances at least, men hated as well as loved, destroyed as well as constructed, tore down as well as built up. He discovered this chiefly from the observation that individuals hated and wished to destroy other individuals at least almost as frequently as they loved them and wished to make them happy. He further found out that individuals entertain not only homicidal wishes but quite often suicidal wishes. Finally, he was forced to raise the question of why men die at all. And so he posited the instinct of Thanatos,[1] the death instinct, or the hate instinct, as it is also called. Physiologically this instinct represents the force which tends to destroy organic life and, hence, to lead organic matter back to the inorganic state. Psychologically, the death instinct gives rise to hostile and aggressive behavior, to aggressive sexual activity, to self and race destruction. It also makes itself felt in destructive intellectual activity such as criticism, satire, or polemics.

As Freud was previously condemned for "attributing everything to sex," some more recent critics have condemned him for "attributing everything to aggression." However, in adopting the death instinct, Freud by no means gave up the life instinct. Since life goes on we must account for it. Furthermore, the instinct theory is the *starting point* but not the *cornerstone* of psychoanalysis. The facts to be explained in this and the next chapter can be just as well accounted for by supposing that aggression is early acquired in the lifetime of the individual and is generated out of the frustration of constructive urges. Thus, as Alexander has pointed out,[2] fear of the consequences of losing love because of jealousy gives rise to aggression without positing the death instinct at all. No matter whether love and hate are instinctual or early acquired, they are always with us. The "facts" of love and hate are psychological data independent of the theory.

The two instincts are not to be looked on as opposed and mutually independent forces. Behavior primarily motivated by the life

[1] Poetically so-called after the god of death.

[2] In his lectures at the Chicago Institute for Psychoanalysis.

instinct may have strong components of the death instinct, and behavior primarily motivated by the death instinct may have strong components of the erotic instinct. It is only through the neutralization of destructive urges by constructive ones that we are able to keep going at all. Finally, old age and death occur when the life instinct is no longer strong enough to neutralize the death instinct. This intermixture of the two instincts leads to the Freudian principle of *ambivalence*. Not even the most passionate love of a man for a woman is free from a certain amount of hate or aggressivity. The old proverb "True love never runs smoothly" may be a popular realization of this. One has only to realize the popularity of "caveman tactics" with most women, the undoubted pleasure with which movie audiences see some heroes strike the heroines, to realize the aggressive elements in the loving of human beings. Even in the act of love-making itself, a certain amount of aggressive pain is often inflicted. One speaks of an embrace "so passionate it was painful," and the like. In extreme cases we know of sadistic murders, which psychopathologists have realized for some time to be perversions of the erotic tendency. Thus the aggressive urges are usually present in erotic behavior. On the other side, it is only through the neutralization of the aggressive urge by the erotic urge that we write polemics against our critics rather than directly attacking them with the pistol or horsewhip. Ambivalence is a phenomenon found not only in direct personal interrelationships but also in most social attitudes.

These basic urges, then, fuse and blend and sometimes diffuse. All life is to be looked on as a conflict or a compromise between them. While the life or love instinct is predominant, life goes on. When the life instinct is not strong enough to neutralize the death instinct, death ensues. The personality is the result of the struggle between the forces of hate and love. This side of psychoanalytic theory, as Freud himself points out, is not so precise as we would like it. It has many poetical and some almost mystical aspects. But these constructs provide psychological tools to account for the basic facts of birth, growth, procreation, and, finally, death. From such crude general concepts, other more precise concepts are readily developed.

The instincts then are the basic sources of energy which give rise to the most various constructive behaviors on the one hand and the most various destructive behaviors on the other. From the time of birth (and according to some analysts even before birth), these

behaviors come into conflict with the world about us. We can neither love everyone we wish to love, nor create all the things we wish. Nor can we destroy everyone we hate, nor burn their houses down. In other words, both the hate and the love instincts become attached to both persons and objects. Society is so constituted as to prevent the fulfillment of many of our wishes. The process through which the love instinct or the hate instinct becomes attached outwardly to objects in the environment or inwardly to the self is called the process of *cathexis*.

We thus speak of *objective* and *narcissistic* cathexis. The individual both loves and hates other individuals and objects and he loves and hates himself (narcissistic love and hate).[1] Although there is no way of actually measuring psychic energy one can schematize the relationships so far discussed in a series of equations.[2] If L equals the sum of the forces of the life instincts and D equals the sum of the forces of the death instincts and B equals behavior, we may say that $B = f(L \cdot D)$.

B will be primarily constructive when $L > D$ and primarily destructive when $L < D$. When $L << D$, death ensues.

Similarly if O refers to object libido and N to narcissistic or self libido and C means constant, it is a good working hypothesis to suppose that O.L. + N.L. = C. and also that O.D. + N.D. = C.

Thus individuals extremely in love think but little of themselves, whereas on falling out of love they become extremely narcissistic. Similarly, although this may be hard to understand at this point, individuals who can no longer hate others tend to hate themselves, and we find the development of guilt feelings and depressions.

From birth, then, we are cathecting ourselves or others with the love instinct or with the hate instinct. In only some of these cases may we possess the individuals we love and destroy those we hate. It is through the frustration of some of these wishes that the personality has its growth and its genesis. Some frustration comes about through constitutional inadequacy of the organism and through the limitations imposed by the physical environment. The most important frustrations psychologically come about through our social institutions, familial, political, and economic. It is

[1] Narcissistic from the Greek Narcissus, who fell in love with his own image. All of us are more or less narcissistic.

[2] I am indebted to Dr. Franz Alexander's lectures for the idea of these "equations."

through these frustrations particularly that personality develops its structure.

Some Other Polarities.—Besides the basic polarity between the life instinct and the death instinct, Freud has posited certain other bipolar tendencies. There is a decided polarity between *activity* and *passivity*. This in general we shall see is derived from the role the individual plays in the sexual relationship. On the whole it belongs to masculinity to be active, femininity to be passive. According to Freud, since all males have aspects of femininity and all females aspects of masculinity, this difference between activity and passivity is also fused in the personality. *Femininity-masculinity* represents another polarity. In the psychological sense the sex of the individual becomes determined only in the process of his life history. Consequently, individuals who may be predominantly masculine may have feminine traits and vice versa. Our activities are directed by the pleasure which we gain from them but must constantly be modified by our ideas of reality. This leads to the antithesis between the *pleasure principle* and the *reality principle*. We strive toward goals which give us pleasure. Very often, however, the realization of the consequences in reality of such behavior forces us to inhibit it, and thus the antithesis between the pleasure principle and the reality principle develops. The infant, as we shall see, starts out primarily motivated by pleasure, but through the frustrations of the life situation is forced to develop a sense of reality.

The Freudians speak also of the polarities *objectivity-subjectivity*, *pleasure-pain*, and *love-hate*. These various reaction tendencies develop during the lifetime of the individual largely on the basis of the antithesis between the life and the death instincts. By *objectivity-subjectivity* is meant the difference between the physical and the psychological world, or the difference between the other world and the self, which all of us recognize. This development comes about, as we shall see, with the development of the ego and the growth of the reality principle. It is an important polarity, because in some cases of abnormal behavior self and outer world are not clearly distinguished, in that the self is sometimes considered as part of the outer world or the outer world is sometimes considered as part of the self.

The polarity *pleasure-pain* is directly connected with the working out of the pleasure principle and directly derived, again, from the antithesis between the life urges and the death urges. The pleasure principle is based on the polarity of pleasure-pain, and, according to

the Freudians, one of the chief motivating factors in all activity is the seeking of pleasure and the avoiding of pain. The *love* and *hate* polarity is essentially the same as the polarity between the aggressive and erotic urges and belongs to the general problem of ambivalence, which we discussed above (page 159).

Conflict.—All the polarities may become the sources of *conflict*. By conflict the psychoanalysts mean a situation in which two wishes are so incompatible that the fulfillment of one would preclude the fulfillment of the other. According to Freud, life is made up of a series of conflict situations. The baby wishes to remain in passive dependence on his mother, but, through the frustration of his nursing habits, he is forced to become active and feed himself. Passivity versus activity, the pleasure-principle versus the reality principle, love versus hate are all involved in this conflict. The young child wishes to retain only the emotional attachments within his own family, but the incest taboo and social frustration make him find friends outside it. The student wishes to marry his best girl, but society pushes him to go on and complete his professional training. All such are *conflict situations*. It is out of these conflict situations that the personality develops. That conflict situations occur in everyone's life needs no demonstration. It is a fact. The psychoanalysts have developed detailed theories to show how growth comes from conflict. In the next chapter we shall see how the complex, differentiated adult personality develops out of the simple, undifferentiated personality of the child, but we shall understand this development much better if we first see how psychoanalysis describes the structure of the adult personality and accounts for the ways in which conflicts may be resolved. The reason that we can follow the psychoanalytic theory of the structure of the normal adult personality and the theory of normal behavior mechanisms better than the theories of personality genesis at this point is simple. This book is addressed to normal adults and we all know something of our own psychology.

3. The Structure of the Personality

The Dynamic Aspects.—In several places in the foregoing chapters we have seen that personality structure is complex. It is true that we should like to think of ourselves as having a soul, a self, a psyche, a person, or personality—our idea of the inner I—something that exists unchanged from birth to death. Religious people even think

of the soul as going on after death. But whenever we fall into conflict situations we realize that the self may be divided into at least two parts. Whenever there is struggle between two equally attractive but mutually opposed goals, the apparent unity of the self must be questioned. Such conflicts occur throughout life and in their milder forms are of daily frequency. The student wishes to marry his sweetheart and continue his medical studies at the same time, but this he realizes to be a financial impossibility. The religious fanatic wishes to remain totally pure, but he is constantly bothered by lascivious ideas. In extreme cases of conflict, the self may become divided into two or three or even more distinct parts and we have developed the well-known multiple personalities. Not only does the personality become involved in conflict but it undergoes constant dynamic change. In the psychoses and the psychoneuroses and the psychopathic character disorders, we have what amounts to a complete restructurization of the personality. Philosophers from the time of the ancient Greeks have realized that the personality was perhaps not constant, unitary, and active. Both Plato and Aristotle spoke of a tripartite division of the personality. Throughout history poets and literary men made much of the conflicts between various parts of the psyche. Freud, however, was the first modern psychologist to attempt a scientific description of the parts of the self or personality and to relate these to both normal and pathologic behavior. Freud realized that to account for all forms of human behavior in terms of systematized theory we would have to think of the self as divided. Consequently, he speaks of the normal adult as being composed of the *id*, the *ego*, and the *superego*. The *id* is the main reservoir of both the life and the death instincts. It is the source of most psychobiologic energy. The id is concerned purely with striving after pleasure and with the basic aggressive strivings. It has no idea of time, nor of reality. Consequently it is concerned only with arriving at the goals set up by our loves and our hates. If the strivings originating in the id were not controlled by reality and society we should become neither adults nor civilized, but rather live in a timeless world of immediate sensory satisfaction or discomfort. As we shall see, the child at birth dynamically is almost wholly id. The ego and superego, of which we shall speak next, are developed out of it in the process of meeting reality or growing up.

By the *ego* Freud means what we ordinarily call the self or the conscious intelligence. The ego is the part of the self in closest con-

tact with physical reality. The ego directs behavior toward a maximal satisfaction of the individual's urges *consistent* with its knowledge of social and physical reality. It is thus the adjustor between the wishes of the id and the demands of physical reality. It realizes the consequences of its own activity and when able establishes balance between the environment and the organism. It is not in itself concerned with morality, with remorse, or with feelings of guilt, which, as we shall see, originate in the superego.

The *superego* is the chief force making for the socialization of the individual. We can suppose both id and ego to be present in individuals who theoretically grew to maturity outside a social group. Of course, such a growth is psychobiologically impossible, but for purposes of illustration let us suppose it is possible. Such an individual would have to adjust his id urges to the reality of the physical environment. But he would have no social conscience, no competitive ideal because he would be a member of no social group and would have no fellow members to compete with. The id is primarily biologically conditioned, the ego primarily conditioned by the physical environment, but the superego is primarily sociologically or culturally conditioned. Since this is so, psychoanalysis from the first has had to consider the effects of culture on personality just as it has had to consider the effects of the biological heritage. The superego is appended to the personality relatively late in life. In practice it becomes almost synonymous with the idea of conscience, in that in it originate feelings of remorse and feelings of guilt. In it is what Freud called the *ego ideal.* In other words, it contains the ideal which we set for our own behavior but to which we seldom arrive. The superego is morally superior. When the forces of the id lead the individual into behavior which does not come up to its demands it seeks revenge and retribution. Dynamically there is a constant struggle between the forces of the id, which is solely directed toward libidinal and aggressive satisfaction, the superego, which is the voice of societal responsibility developed in the process of growing up and becoming civilized, and the ego, which is the most directly known part of ourselves—what we usually think of as the self or the conscious intelligence. For instance, when we speak of falling into temptation, having a struggle with it, and finally overcoming it, we have a situation in which the ego adjusts the forces of the id to those of the superego. For example, the feeling, "I should like to kiss that girl" is the conscious expression of an id impulse while, "But

I won't do it now because she would rebuff me with so many people around" is the adjustment from the ego, and, finally, "But I must not do it at all, because kissing is not nice" comes from the superego. Similarly, "I should like to beat up my critic" comes from the id, "but he is larger than I and might beat me up" comes from the ego, while "you (as the voice of conscience) should turn the other cheek" comes from the superego. These examples are of conscious conflict. Probably even more frequent are unconscious conflicts which we can only speak of after we have introduced the concept of the unconscious.

Thus, by the dynamic aspects of the self, Freud means the agents through which conflicts arising in the instincts are worked out. In the normal adult personality there is a fairly harmonious balance maintained between the id, the ego, and the superego, and external reality. This balance is, of course, being constantly upset, and our actual behavior, social, psychological, and to a large extent even physiological, is the resultant of the resolutions of these conflicts. We shall later see how the normal adult develops ego and superego out of id through earlier conflicts in the life situation. We shall also see that the various psychopathological phenomena represent economic restructurization or resolutions of conflict situations.

The Topographical Aspects of the Self.—Conflict between the ego, superego, and id may occur in the conscious, foreconscious, or unconscious levels of the psyche. Freud refers to the unconscious, the foreconscious, the conscious as the topographical aspects of the self. Freud has done more than any other individual to popularize the term "unconscious." The author has elsewhere described what Freud means by the topographical aspects of the self, and this will be quoted.

> The idea of the unconscious as a necessary supplement to the conscious is again not an original idea of Freud's. The idea of unconscious mental phenomena had been used by many speculative philosophers for almost two centuries before Freud's original researches. Leibnitz used it, as did E. von Hartmann, and shortly before Freud the concept played an integral part in Schopenhauer's philosophy, which through Nietzsche had influenced Freud's thinking considerably. That the psychological phenomena of temporary forgetting with subsequent recall, habituation, hypnosis, and multiple personality required the postulation of mental processes other than those of the stream of consciousness had been realized by most psychologists for some time. Freud's accomplishment here was similar to his achievement in setting up the theory of the dynamic aspects of the

personality. He made the concept more fruitful and workable by relating it to the findings both of himself and of others in psychopathology.

The Conscious, Foreconscious, Unconscious.—We all know what we mean by consciousness and by the *conscious* Freud means that segment of the mind which is concerned with immediate awareness. Most of us can summon into the conscious a great many other things, such as names, dates, arguments, reminiscences of past experience, and the like, which are not constantly present. That segment of the mind where the readily recallable is to be located is called by Freud the *foreconscious.* But we all have experienced material which we cannot recall at will, but which may occur to us automatically and which we know is present in our minds through hypnosis and other experimental procedures. This segment of the mind is the Freudian *unconscious.* In it are to be found the ideas and wishes and strivings which were once in the conscious, but which have been forced into the unconscious. Also here are to be located many strivings and desires which originate from the energy of the id and have never been conscious. All behavior is the resultant of the dynamical conflicts between the forces of the id, the superego, and the ego. These conflicts and their resolution take place either in the conscious, the foreconscious, or the unconscious. The beginning student is sometimes apt to confuse the dynamical aspects of the personality with the topographical situations of the mind. While the ego forces are chiefly resident in the conscious and id forces chiefly resident in the unconscious, there is a considerable overlap. The superego, for instance, has conscious, unconscious, and foreconscious parts, and large segments of the ego lie in the foreconscious and the unconscious. This is quite clearly demonstrated in the following diagram made from Healy, Bronner, and Bowers (Fig. 7). It is this discovery which has made Freud say that besides the dynamical problem in all human behavior there is a topographical problem, *i.e.*, where in the mind does the dynamics of the conflict situation occur? [From J. F. Brown, *Psychology and the Social Order*, McGraw-Hill Book Company, Inc., New York, 1936, pp. 314–316.]

The Economical Aspects of Behavior.—Behavior is accounted for by the psychological struggles between ego, superego, and id, taking place in the unconscious, conscious, and foreconscious. The resolution most frequently and normally consists in the restitution of normal equilibrium and personality growth. Sometimes the resolution consists in the development of mental illness or of character defects and sometimes in the works of the genius. It occurs, however, and this was one of the greatest insights of Freud, always as the dynamics of the total situation demand. This dynamical resolution of conflict is the *economical* aspect of behavior according to the Freudians. Thus, although the development of a major mental illness may be

looked on as a terrible thing, it is still economical, because often only by so doing may the individual be maintained as an intact organism at all. It is well-known that life often becomes so unbearable that only through the development of a psychosis may we evade suicide. Similarly, although the works of the genius are to be looked on as socially much more desirable than the productions of the psychotics, we know today that genius arises only in conflict situations of extreme severity. We have already seen many examples of the

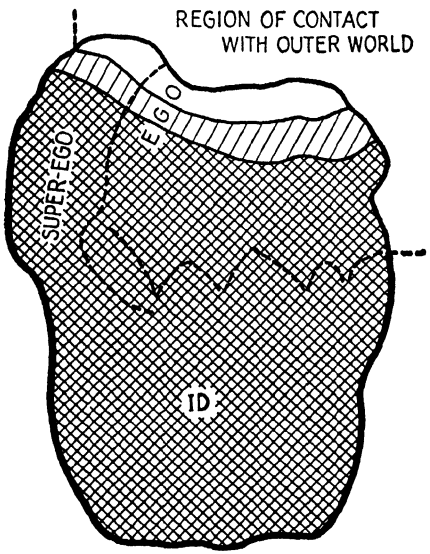


FIG. 7.—Showing the topographical relationships of the conscious, unconscious, foreconscious and ego, superego, and id. Heavy shading = unconscious; light shading = foreconscious; unshaded = conscious. (*Redrawn by permission from Healy, Bronner and Bowers, The Structure and Meaning of Psychoanalyses, New York, Alfred A. Knopf, Inc,* 1931.)

economical aspects of symptom formation. Symptoms are economical, however, only in the sense that all behavior is economical; namely, that conflict situations are resolved in accordance with the least expenditure of energy possible in one existing total situation. This proposition cannot at the present time be proved but it is an invaluable working hypothesis for psychology. Through accepting it we are able to see order in behaviors which were previously thought of as accidental and chaotic.[1]

[1] This proposition of economy has also found adherents in academic psychology. *Cf.* Wheeler (1932) and Lewin (1935).

4. Mechanisms

Conflicts between ego, superego, and id in the conscious or unconscious are resolved in an economical fashion in various manners through the so-called "mechanisms." These mechanisms are various unconscious or conscious processes whereby the inner conflict situation is eliminated or reduced in its severity. They have thus an economical function. There are many ways in which conflicts may be resolved. Outlets for the conflict situation which are socially acceptable may be provided. Deflected discharge of the energy in behavior consistent with the standards of the ego and superego may be brought about. Barriers or defenses may be raised against the discharge of the conflict energy and thus preserve the integrity of the organism. For instance, the student who cannot afford to marry his sweetheart may utilize the libidinal energy previously directed toward her in writing love sonnets. He does this by the mechanism known as *sublimation.* A young man who hates his rich uncle and wishes for his death may overcome the conflict so aroused by developing hates for his boss through the mechanism of *displacement.* The old maid who suffers from the conflict which is aroused by the wish for a lover may protect against it by developing a fear that someone is under her bed; she is thus utilizing the mechanism of *reaction formation.*

It is difficult to give an orderly description of the psychoanalytic mechanisms for several reasons. Freud started with only a few, and as occasion demanded with the growth of the theory both he and his followers added others. There has been no attempt so far as the author knows to give them a schematic and orderly classification. Some of the later described mechanisms are more basic than the earlier and there is considerable overlap between many of them. Some of them are active throughout the whole field of behavioral problems and others refer to very specific mental activities in but a limited sphere. In the following paragraphs we shall attempt to introduce only the most basic mechanisms, in as orderly a fashion as possible. The various minor mechanisms will be introduced in the text as occasion demands.

We have already dealt with the conflict situation. All the mechanisms essentially derive from this since they are ways of resolving conflict. Not all conflicts are or need to be resolved. Many students finished their professional training and only years later

marry their sweethearts. Many would-be musicians go into business and always consciously hanker after a musical career. In this case we speak of the *continuation* of the conflict. Such continuation may be dangerous to the personality in some cases, but all of us are quite conscious of the continuation of many conflicts.

In normal adults very frequently and in children considerably less frequently, conflicts are resolved by *discriminatory decision and renunciation.* The young man may take a fond and sentimental farewell of his sweetheart and continue his studies successfully and remain quite conscious of a mild nostalgia for the girl throughout his life. The embryo musician may decide business has more to offer and give up an ambition to play and later get great pleasure out of going to concerts. The gay young blade may intelligently decide that alcohol and the fleshpots are really less desirable than a respectable position in society and give them up with only an occasional regret. In discriminatory decision the ego consciously weighs the pros and cons in the conflict situation and renounces one of the opposed tendencies. Such discriminatory decision is always an advisable mechanism for solving conflicts at the conscious level. But not all conflicts are conscious and even conscious conflicts are not always so to be resolved. In general, discriminatory decision may be applied when the ego is strong and the conflict relatively mild. In the next chapter we shall see that this is not the case in childhood, where the ego is weak and the conflicts particularly severe.

Continuation and discriminatory decision are of no great significance for personality genesis. *Repression*, however, is of the greatest significance. That part of a conflict situation which is most unacceptable to the ego and superego may be forced into the unconscious by the ego. When this occurs the mechanism is called "repression." Repression is often confused with *inhibition*, where the individual consciously and purposely refrains from an activity, as in cases where there is a continuation of the conflict and cases of discriminatory decision. It is also sometimes confused with *suppression*, where the individual consciously forces an unacceptable idea out of his mind successfully for a period of time. Repression forces the idea deep into the unconscious, is not discriminatively decided on by the ego, and only occurs in a situation where intense fear develops with regard to the consequences of carrying out some wish. It is frequent in childhood, where the weak ego of the child is unable to cope with the real or imagined consequence of some of his loves and hates. In

the next chapter we shall see how the sequence, love—jealousy—hostility toward object of jealousy—fear of the consequences of this hostility, leads to childhood repression. Some repressions are undoubtedly successful in that the repressed remains fairly dormant in the unconscious. In most cases, however, the conflict continues as an *unconscious* conflict and from this secondary conflict the need for further mechanisms to resolve conflict arises.

The resolution of conscious conflict need not concern us much more. Many times every day we make more or less satisfactory decisions as to courses of action in conflict situations. The most important discovery of modern psychodynamic theory is that of unconscious conflict and the mechanisms of its resolution. The wish which as we have seen is the father of both thought and deed is often an unconscious wish which was originally conscious and has been repressed. In this way the existence of unconscious conflict has a demonstrable effect on even our conscious resolutions of conflict. The young man who discriminately decided to part with his sweetheart in order to finish his professional training makes this decision as an apparent free agent. A psychoanalysis would show us that unconscious conflicts and repressed wishes have a great deal to do with his conscious decisions. He may, for instance, have an unconscious fear of the consequences of sexual relations and an unconscious wish to exhibit himself which are actually far more important in making up his mind to leave the girl and become a lawyer than are the reasons he gives to himself.

Unconscious conflict is resolved by the most varying types of mechanisms. The way in which it is resolved (either fully or partially, according to the economics of the total situation) is the most important determinant of personality. The determination of personality is not, of course, by the resolution of a single conflict but by the resolution of the series of conflicts which make up a life history. Unconscious conflict plays an important role in the growth of the "normal" personality. This will be our topic in the next chapter. In fact, much of the behavior of the "normal" adult is determined by unconscious conflict and this will concern us in Chap. XI. Finally, in Part IV we shall be concerned with the ways in which the resolution of unconscious conflict leads to abnormal or psychopathological adjustment.

Before we classify the mechanisms utilized for the resolution of unconscious conflict we must point out that the transition from fully

conscious conflict to deeply unconscious conflict is a continuous one. Consequently, the mechanisms of resolution of unconscious conflicts are also to be observed at the preconscious and at times conscious level. This is fortunate because the psychoanalysts would scarcely have discovered the mechanisms of the deep unconscious had they not been able to observe the working of similar mechanisms on a preconscious level in themselves and their patients. So, although the most important workings of the mechanisms are unconscious, we can still find suitable conscious mechanisms to illustrate them.

The mechanisms may be roughly classified into two groups, those which in themselves resolve or reduce a conflict in a rather specific fashion, which we shall call the "major mechanisms," and the mechanisms which are used as supplementary tools by the major mechanisms, which we shall call "minor mechanisms." The distinction is not a completely clear-cut logical dichotomy because in some cases minor mechanisms take over the function of major mechanisms and vice versa.

Repression is the major mechanism for the solution of conscious conflict. Conversion, regression, sublimation, reaction formation, and rationalization are the major mechanisms for the resolution of unconscious conflict.

Conversion is the mechanism through which repressed energy connected with the frustration of basic drives is changed (converted) into the functional symptoms of bodily disease. This is a particularly important mechanism in psychoanalytic theory because through it the analysts are able to account for all of the phenomena of hysteria and many of the phenomena of what are ordinarily considered organic diseases and problems for internal medicine. Of the specific mechanisms connected with mental disease, conversion is probably the most thoroughly understood. We have already studied in some detail a case of conversion hysteria. This case, that of the girl with the anesthetic thigh, showed us how repressed libidinal energy was allowed a perverse outlet through the development of a hysterical anesthesia. In this case, as in all cases of conversion, we have first the repression of an emotional conflict, followed by the failure of the complete repression and the return of the energy to consciousness in a disguised form. That the symptoms of conversion hysteria take the form they do can only be completely understood after we have learned about the development of the personality (in the next chapter). At a conscious level we all

have wished to be ill to avoid some painful situation. Some people actually become ill under these circumstances. One of the ways in which conflict may be avoided is a conscious or unconscious "flight into sickness."

By *regression* we mean the reversal of the ordinarily progressive sequence of development and hence the return to more primitive forms of personality structure. Psychoanalysis is concerned with two forms of regression: *ego regression* and *libido regression.* These may occur together or we may have libido regression without ego regression. On the other hand, we seldom find ego regression without libido regression. By libido regression we mean the return to earlier forms of outlet of the libidinal impulses. Thus an adult may resolve an unconscious conflict by adopting the form of love relations of the child. We shall see many examples of this in our discussion of the psychoses. Similarly an individual who has developed a fair amount of superego may completely lose this when he loses social responsibility and conscience. As conversion was the most important mechanism in accounting for hysterical phenomena and relating the problems of medical psychology, regression is the basic concept in accounting for the development of the major functional psychoses. The psychoanalysts also use regression, however, to account for very much milder symptoms, so that one can speak of childish behavior in the adult as being regressive, or the primitivization and disruption of normal child behavior in temper tantrums as regression, or the temporary development of a previous form of sexual behavior in an otherwise normally adjusted individual as regression. Conflict may thus be resolved by "flight into childhood.'

By *sublimation* we mean the resolution of the basic urge frustrations through the substitution of a socially acceptable goal. Sublimation is a difficult term to use scientifically, however, because of its definitely evaluative connotation. Conversion, as we have already seen, means the substitution of behaviors which are socially acceptable but at the same time individually incapacitating. By sublimation we mean behaviors which in the eyes of society are not only acceptable but also have definite social values. According to the psychoanalysts, all forms of creative intellectual endeavor represent sublimations of the underlying basic urges. Sublimation thus becomes a very important mechanism because through it we are able to account for the behavior of the genius and consequently relate the genius to the normal and to the psychotic, neurotic, and

perverse. We may best avoid the evaluative connotation of sublimation by thinking of sublimation as the redirection of basic urges into socially approved channels whereby the individual develops neither incapacitating physiological nor incapacitating psychological symptons. Through sublimation not only the creation of works of art and great scientific discoveries but also a great deal of moderately constructive normal behavior is to be understood. Thus unconscious conflict may be resolved by a "flight into creative work."

The above mechanisms allow perverse or vicarious discharge of the repressed wish. We come now to a mechanism which is efficient in that it strengthens repression by denying the conflict. By *reaction formation* or *overcompensation* we mean the development of behaviors which are diametrically opposed to the unconscious wish. Doing the opposite of some wish gives us outlet for repressed energy and is economical in the psychological sense in that by so doing we deny thoroughly and absolutely the original wish and so strengthen its repression. Consequently, according to the psychoanalysts, many of the positive things which we do are reaction formations against wishes which we cannot admit but are quite opposed in direction. We have already seen one example of this in our discussion of the well-known "old maid's neurosis." The old maid who constantly is afraid of finding a possible seducer under her bed is protecting herself from the admission of the wish to find one by developing fear, a reaction formation against the wish. A great deal of extreme "overmorality" and most prudishness probably arises on the basis of reaction formations. From analysis of actual cases psychoanalysts have discovered that many vegetarians are afraid of their oral-sadistic impulses and strengthen the repression of these by not eating meat in any form. Many vice crusaders and searchers after prurient literature are protecting themselves against their own libidinal impulses, which their superegos cannot admit. Reaction formation is thus a very important mechanism in the psychoanalytic psychology because it allows us to derive many of the characteristics of the so-called "normal" personality and is one of the chief mechanisms for giving us a basis for understanding character disorders. We may thus resolve or rather reduce unconscious conflict by "behavioral denial of it."

By *rationalization* we mean the invention of consciously acceptable motives by the ego to cover up those unconscious motives which it

cannot accept. The process of rationalization occurs along with various other mechanisms. Rationalization means "to make rational." It refers to the causes which the individual consciously assigns for his behavior. Thus in conversion the individual rationalizes the sickness by attributing it to accident or germs; in regression the individual excuses his childishness because others are cruel or do not understand him; in sublimation art becomes "art-for-its-own-sake" or "only science is pure"; and in reaction formation the interest in prurient literature is rationalized by excusing it on the basis of protecting others. In many cases, however, rationalization is the chief mechanism for resolving unconscious conflict. Thus "guilt feelings" and love of display of many great philanthropists are rationalized in "philanthropy"; the bitter, even sadistic, polemical denunciations of rivals by scientists are rationalized as interest in the purity of science. We may thus resolve unconscious conflicts by "assigning spurious but consciously acceptable reasons for following out a repressed wish."

These major mechanisms utilize a whole host of minor mechanisms. Space allows only the presentation of the most important of these.

Transference signifies the shifting of the feelings of love—the erotic cathexis—from one object or person to another. We may also speak of transference of aggressive urges. Transference becomes very important at various stages in the individual's life, particularly when the family or society frustrates the existing libidinal cathexis. Examples of transference occur in the libidinal attachments to the parents, which are forced elsewhere in adolescence. We shall also see that transference is very important in the process of psychoanalysis.

Identification refers to the mechanism through which a person attempts to mold his own ego or self after that of someone else or believes himself to have some other person's personality. It has often been observed that children imitate the mannerisms of their parents. Superiors in all the professions are imitated by inferiors. The adoption of all sorts of characteristics of other individuals belongs to the identification process. Identifications may be made unconscious by repression. They also play an active role in many of the major mechanisms. The young man leaving his fiancee may, for instance, identify himself with an admired bachelor professor and so gain the necessary strength to give up his love affair.

Introjection refers to the incorporation by the ego into itself of the outside environment or of other individuals. Introjection is like identification except that in identification the individual wants to be like the object, while in introjection he considers the object a part of himself. In extreme cases, as schizophrenia, the individual believes that he has the characteristics or abilities of others. In this way delusions of mistaken identity are examples of introjections. In a milder form all of us indulge in introjection through the phenomenon known to psychologists for some time as empathy. The great popularity of the success movie with the happy ending is only understood through the unconscious introjection of the hero and heroine by members of the audience. Identified individuals like the parents may be unconsciously introjected so that they become considered part of the person. We shall see the origin of the superego in this process. In normal life we tend to introject admired and loved objects and through this process strengthen the power of the love instinct. "I shall carry you forever in my heart," "You are always with me," and like statements are popular examples of how introjection works. Introjection plays a role in most of the major mechanisms.

Projection may be considered as the inverse of introjection in that the ego attributes to environmental objects or other persons characteristics of their own personalities which are unacceptable to the ego. In at least semiconscious form, projection is the tendency in all of us to seek our faults in others. The "tu quoque" argument (*i.e.*, the argument "you also are weak") is the standard example of this. Projection may also be unconscious. The vice crusader projects the prurience of his own mind on others in the process of his reaction formation. Projection protects us from the results of our own aggressivity by attributing it to others. In extreme forms it becomes the basic mechanism in the paranoid psychoses.

Displacement refers to the transference of emotion from one object to another. Certain emotional reactions like hate for the parents or genital strivings for the siblings cannot be accepted by the ego. When we hate someone society demands we must love or love somebody whom society will not permit us to love, a conflict is, of course, engendered. By displacing the emotion to some other object, this conflict is resolved. When we are angry with our wives and take it out on the cat or dog (or sometimes vice versa, of course), we do this in a semiconscious fashion. But displacement works also

unconsciously. The aggression we may feel for a parent is often displaced to social movements or other individuals. The young man who cannot admit hatred of his father may become a revolutionary or hate his boss. The child who cannot admit a real libidinal attachment to the mother may get a crush on a teacher.

The mechanisms of transference, identification, introjection, and displacement are of the very greatest importance for the role which they play not only in the major mechanisms but in the process of personality development. In presenting the mechanisms we have had to simplify them and remove them from the real life situations in which they occur. In actual behavior we do not have simple conflicts being directly repressed and leading to the immediate resolution of the unconscious conflict by means of a simple mechanism.

Actually there are usually many conflicting impulses in the conflict situation. There is always ambivalence. The unconscious conflict usually is resolved by the interplay of several major mechanisms through utilization of several minor ones. Actual behavior is what Freud has called "overdetermined." There are conscious determining factors which may be quite rational; there are the rationalizations; and finally there are unconscious mechanisms at work. The young man who chooses to study for a profession rather than to go on with marriage decides, perhaps quite rationally, that he cannot marry at this particular time. But his decision may be based on a rationalization of an unconscious fear of women. And this unconscious fear may be based on a whole series of early conflict situations, repressions, and subsequent reductions and partial resolutions by the most varying major and minor mechanisms.

The theories of basic urges, of conflict, of personality structure, and of mechanisms are the cornerstones on which psychoanalysis is constructed. They have been invented as constructs to account for the facts which have been uncovered by psychoanalysis. They help us understand the facts of personality development which will be given in the next chapter.

5. Summary

1. Psychoanalysis was founded by Freud as a therapeutic method for handling neuroses. From this modest start it has become the most systematic school of psychology during the last fifty years. The chief events in Freud's professional career and in the growth of psychoanalysis were given.

2. The psychoanalytic theory starts with the postulation of basic life and death urges. These give rise to other polarities, such as activity versus passivity and pleasure principle versus reality principle. Frustration of basic urges gives rise to conflicts.

3. The normal adult personality has three dynamic constituent parts: id, ego, superego; three topographical locations; conscious, foreconscious, unconscious. Conflicts between basic urges and the environment are resolved by the dynamic parts working in the topographical regions in an economic fashion.

4. Conflicts are resolved by mechanisms. The major mechanisms are discriminatory decision, repression, conversion, regression, sublimation, reaction formation, and rationalization. The minor mechanisms are transference, identification, introjection, projection, and displacement.

Bibliographical Note

First to be listed are works concerned with the theory as a whole. The chief works of Freud are mentioned in this chapter. The basic books have been recently published in a cheap one-volume edition by the Modern Library. This edition is highly recommended. Besides these the beginner can read the *Introductory Lectures* and the *New Series of Introductory Lectures*. Besides the works of Freud the most important original works are those of Abraham (1927), Ferenczi (1916), Jones (1923), and Alexander (1930). There are a large number of general introductions to psychoanalysis in English but we shall list only the most recent and useful. Healy, Bronner, and Bowers give the chief orthodox viewpoints on the even pages and the deviate views on the odd pages and pretty well cover the literature to 1930. Hendrick is completely up to date and goes into the implications of psychoanalytic theory for medicine and the social sciences. Menninger's two books (1937, 1938) taken together, give an authentic and highly readable presentation of the theory. Alexander (1936) develops the theory and shows how it is applicable to medicine. Stephen covers the same ground more briefly.

Next to be listed are most important works on specific parts of the theory. Important for the theory of the basic urges is Freud (1930). Some analysts, like Menninger (1938) and Wittels (1939), accept the instinctual nature of drives, others like Fenichel do not, and still others like Alexander (1940) take a middle ground. Money-Kyrle relates the theory of basic urges to concepts of both psychology and biology.

The structure of the normal personality is described in Freud (1927). The importance of these conceptions for analysis is developed by Alexander (1930).

The mechanisms have been developed in various writings of both Freud and his followers. Particularly important for the mechanisms is Freud's *Interpretation of Dreams* (1933*a*). The *Studies in Hysteria* (with Breuer) develop the ideas of conversion. Repression, regression, and reaction formation are handled specifically in Vol. IV of the *Collected Papers* (1924*a*). Jones first developed the idea of rationalization.

The whole psychoanalytic literature is listed through 1926 in Rickman (1928*b*).

CHAPTER X

PSYCHOANALYSIS: THEORY OF PSYCHOSEXUAL GENESIS

1. Evidence for the Psychoanalytic Theory

In the last chapter, we saw how the "normal" adult personality was structured and how the various psychological mechanisms brought about resolution of conflicts arising between its different parts. In this chapter, we shall see how the structure of the "normal" adult personality arises. In the technique of psychoanalysis, Freud early came to the conclusion that the symptoms which his neurotic patients showed were related to events from the earliest years of the individual's life. He found first that the symptoms of the adult neurotic were related to frustrations of the libidinal part of the erotic instinct. These frustrations occurred as early as the first year and continued through childhood. He was thus led to believe that children showed manifestations of the sexual urges and that any theory of personality genesis must take infantile sexuality into account. After accepting infantile sexuality, Freud gradually developed his theory of psychosexual genesis. By calling the theory that of *psychosexual genesis*, he emphasized the fact that sex has both an organic biological and a psychological aspect. When later he discovered the importance of the destructive urges, he was able to point out how their frustration played an equally important role in personality development. Although the theory is still usually referred to as the theory of psychosexual genesis, the destructive urges and their frustration play such a very great role that it might well be named the theory of psychosexual-aggressivity genesis. The theory of psychosexual genesis is concerned with the frustrations which the basic instincts undergo in childhood.

On the basis of the frustration of the biologically conditioned behaviors of childhood develop not only the psychological characteristics of the mentally ill, but also many of the traits of the "normal" personality. In this chapter, we shall discuss the development of the average individual. Since it will be impossible to give

all the evidence on which our findings are based, the nature and the breadth of this evidence should first be outlined. This is particularly important because the belief is still widespread in some circles that psychoanalysis is pretty much a figment of Freud's imagination. Freud was a great intuitive genius. The original evidence for his theory was based on but a handful of cases analyzed by himself. Freud set up almost all the basic postulates of his theory alone. He soon found adherents, however, and many other individuals were thus analyzed. Today, many thousands have been analyzed, and in the analysis of them certain regularities have been found. The theory originally was based on memories of childhood recovered by neurotic individuals in the course of psychoanalytic treatment. This evidence considered by itself, while very suggestive, cannot be conclusive for two reasons. There is, first, the possibility which critics of psychoanalysis always mention, that suggestion on the part of the psychoanalyst causes the patient to "remember" things which really exist only in the analyst's mind. Secondly, although all modern theories, including the Freudian, suppose that the same mechanisms are at work in the "normal" and "neurotic" mind, it could be that neurotic minds show differences in kind from the normal. Such criticisms were undoubtedly to be taken seriously in the early days of psychoanalysis. Today they are no longer so to be taken because they have been met by many other forms of evidence. We list some of these.

1. **Analysis of "Normals."**—Besides the neurotics, today hundreds of normals have been analyzed. Most of these are psychiatrists who have undergone an analysis in order to become trained psychoanalysts. (In Part IV, we shall see why it is necessary for psychoanalysts themselves to become psychoanalyzed.) The findings in the psychoanalyses of such "normals," although differing somewhat in respect to content, completely confirm the general theory of psychosexual genesis. This overcomes the objection that neurotic development varies essentially in kind from normal development.

2. **Observation of the Behavior of Normal and Neurotic Children.** After the theory of psychosexual genesis had been set up, observations of children by psychologists (many of whom were unfavorable to the theory) all pointed to the basic correctness of the theory. It would be misleading to state that all observers are in complete agreement on the detailed points, but the consensus of opinion supports the broad outlines of the theory. Certainly very young babies

(under one year of age) show marked libidinal and aggressive attachments to the parents and siblings. That sexual "perversion" is normal in children and is a frequent phenomenon in adults is known to all psychologists. That the vast majority live for a period of time in a family is not debatable. With these facts in mind, the psychoanalytic postulate of infantile sexuality becomes an indispensable one for genetic psychology.[1] Not only professional psychologists but educated lay parents have noticed signs of infantile sexuality. Some of these have been noted by Ives Hendrick:

> Mothers who are not too slavish adherents of the "innocence" myths more often recognize the factuality of Freud's pronouncements than do scientists. They have seen the erections of babies, have noticed the infant's masturbation, have perhaps been amused that when a little girl's hand was removed from her genitals, she put it in her mouth. They have seen the intense curiosity of the child in its excrement, have perhaps felt normal adult disgust at the undeniable fact that a two-year-old would even touch faeces with apparent pleasure. They have observed a boy's pride in a stream of urine. Pediatricians have noted that sucklings will often urinate when their most constant attendant picks them up, but not when someone else is holding them. If the mother has not shown too intense displeasure, questions as to sexual differences and reproduction by the infant will be persistent. To those who claim that direct observation of children discloses no curiosity in sexual topics and no pleasure in the body orifices, the analyst can only answer: "None so blind as they who will not see," or, because of their own modesty, deny what they do see. And he will realize that the child is extraordinarily intuitive, compared with the adult, recognizes immediately a momentary frown, the slightest sign of displeasure, and very rapidly learns to keep his sexuality secret from parents who abhor the notion that it may be manifest in a child.[2]

Such observations overcome the criticism that the results are due to suggestion.

3. **Observations in the Field of Psychopathology.**—The study, quite independent of psychoanalysis, of psychotic, sexually perverse, and characterologically disordered individuals has shown quite clearly that by accepting the main outlines of the theory of psychosexual genesis we may best relate these phenomena to each other and to normal behavior. This aspect of psychoanalysis will be dis-

[1] *Cf.* the works of Klein, A. Freud (1928), and Isaacs.

[2] Ives Hendrick, *Facts and Theories of Psychoanalysis*, Alfred A. Knopf, Inc., New York, 1939, pp. 62*g*–62*h*.

cussed in Part IV. This observation alone would be only suggestive were it not for the more deeply founded direct psychoanalytic studies. With them it furnishes rather conclusive evidence.

4. Studies of Genius; Studies in the Field of Cultural Anthropology; Studies in the Field of Psychosomatic Medicine.—Studies in all these fields show that in its broadest outlines the theory of psychosexual genesis, which was developed by Freud from the personal analysis of a few neurotic patients, is correct. Many modifications have, of course, been made in it in the course of time and there is still some debate about specific points. A vast accumulation of data, however, supports the essential contentions of psychoanalysis.

2. Why the "Normal" Adult Finds Psychoanalysis Hard to Accept

Despite the great amount of evidence on which the psychoanalytic theory now rests, the well-adjusted adult on first hearing is still inclined to look on the Freudian theory of psychosexual genesis as somewhat preposterous. This original reaction is a healthy one and quite understandable. It will increase our insight into the theory if we take time to see why this is so.

At the time of its original enunciation the layman's distrust of Freudian psychology was shared by the vast majority of medical men. Freud was considered a rather dirty-minded individual belonging to a decadent and corrupt culture. The chief disturbing factor at this time was the attribution of sexuality to children. In Victorian times even adult sexuality was misunderstood, and with the exception of a few pioneer sexologists like Krafft-Ebing and Havelock Ellis, no one even studied it. Undoubtedly to people then, as now, sex was of the very greatest interest. But it was considered a part of our lower natures, somewhat nasty, and however fascinating a topic for private discussion, not a publicly discussible human function. The heterosexual marriage relationship could be tolerated with reservations, but any other forms of sexual relationship were extremely wicked. Above everything, children were innocent and sexless. Now we have already seen how Freud considered heterosexual attachments between adults as only one specific instance of the general workings of the libidinal element of the life instinct. Libido, let us be reminded, refers to that very general urge to come

into close physical contact with other individuals. Not only is the adult heterosexual love relationship libidinal in nature but also parental love, sibling love, and the love of close friendships in the heterosexual as well as the homosexual sense.

We arrive at normal adulthood only through overcoming the infantile sex urges. In the course of normal development, the infant must become weaned, he must be brought to habits of personal cleanliness, he must be broken of the universal habit of infantile masturbation. In the process of weaning, he must renounce his oral sexuality, that is, he must give up his desire for libidinal satisfaction through sucking at his mother's breast. In the process of toilet training, he must learn to control his urethral and anal expulsions. In breaking the habit of infantile masturbation, he must renounce all sexuality for the long period of latency, *i.e.*, from about seven to fourteen. The details of all this follow in the next paragraphs. All these renunciations and subsequent repressions are brought about through conflict and very often are psychologically traumatic experiences in the life of the child. Once these conflicts are satisfactorily solved, the individual can keep them solved only through complete repression, that is, denial of them. Consequently, it is easy to see that the average normal adult should erect defenses against the reawakening of these severe psychological conflicts. In this, the normal adult is behaving economically just as the abnormal individual is protecting himself from his conflicts by the development of his symptoms. To take but one example: the average adult would be inclined to deny vehemently any pleasurable interest in the act of defecation. We shall later see that defecation plays a very important role in some of the psychoses. The mere prevalence of bathroom humor is an indication, however, that the average individual has anal interests. Occasionally, even in the normal individual, attenuated forms of interest in anal behavior are permitted. In burlesque shows and in chorus dances, the region of the buttocks is exploited on the stage. Children and primitives, like psychotics, to a certain extent are quite willing to admit an interest in the anal regions and in the process of defecation.

Today we find two types of individuals who are inclined vehemently to reject the Freudian theory of psychosexual genesis. The first group includes all those who know nothing about it, and their rejection is quite normal and easily understood. On the other hand, many psychologists and even some psychiatrists are still denouncing

the Freudian theory in a polemical fashion. They are exhibiting the well-known factor of "resistance." Even those psychiatrists who are quite ready to attribute infantile sexuality to others usually show resistance when they undergo psychoanalysis themselves.

The layman, and until very recently even the psychologist, is inclined to consider the child only as an incomplete adult. He is inclined to think that the child perceives the world as the adult perceives it, only not so completely, without its finer nuances, and reacts to the world as the adult reacts to it, only less efficiently. This leads to difficulties in understanding child psychology. When psychoanalysis says that the child identifies himself with one of the parents and later introjects the image of his parent as a part of his own personality and identifies this image as a part of himself, the average individual believes this impossible because he himself would not be so confused. All the more recent researches into child psychology not only by the Freudians but also by academic psychologists lead us to believe that the psychobiological organization of the child is quite different from that of the adult. For a long time, we have realized that children are anatomically quite different from adults. Now we realize that these anatomical differences are probably slight compared with the psychological differences. The child is very much less differentiated than the adult and much more of a psychobiological unit. Furthermore, the child does not differentiate the inside world of imagination and the outside world of reality as does the adult. These differences between adults and children fit in well with the Freudian ideas of psychosexual genesis. Knowledge of them makes the theory much more plausible to the average layman. When our modern psychological ideas of the child's personality are better known, one of the chief stumbling blocks in the way of acceptance of Freud's theory will be removed.[1]

The theory of psychosexual genesis is based not only on the psychoanalysis of adults but on the observations of the simplest and most homely human relationships of childhood. It is an attempt to account for personality as something which develops out of the biological constitution of the newborn child as that child is forced to grow up and meet the reality of the world in which we live and the responsibilities which accrue with increasing independ-

[1] Concerning the differences in structure between the child and adult, compare the well-known treatises of child psychology by non-analytic psychologists like Lewin (1935), Anderson, Piaget (1926), as well as those of psychoanalysts.

ence. Previous theories all conceived of growth and development as the unwinding of hidden springs within the organism. Freud's theory is field-theoretical because it always considers the interaction of the forces within the organism and the forces of the environment. When the ovum is fertilized by the sperm, an individual is created. To begin with, he is completely dependent on the mother organism. He does not even breathe for himself. At birth he begins to breathe, but all through the nursing stage the mother organism provides him with food. He must learn to eat for himself, to walk, to talk, to control his sphincter muscles, to read and write, and finally to leave the parental home and set up one of his own. Each one of these stages makes him more independent. There are undoubtedly factors of physiological and psychological maturation which "push" him on in this process but there seems also to be some principle of physiological and psychological inertia which makes individuals satisfied with the *status quo* when this is pleasant. Thus growth, both psychological and physiological, is a process which does not unwind automatically but which is brought about by upsetting the equilibrium of the established *status quo*.

Sometimes the duties and responsibilities of the growing-up process are more unpleasant than the pleasures of independence given by growing up and all of us at one time or another long for our childhood. When we are comfortable and satisfied, we are inclined to let things ride. And children are like us in this. Freud showed that we only grow up (*i.e.*, allow ourselves to be "weaned" from dependence on the mother organism first and then on the familial environment) because we are forced to (*i.e.*, our *status quo* is upset). Freud studied objectively and scientifically how we react to the process of being "weaned" not only in the direct and important sense of being weaned from the mother, but in all the other "weanings" we have to go through.

It is amazing that the dynamics of these "weanings" were never studied before. They are the universally homely facts of childhood, but adults still find them hard to accept because the memory of them has been repressed in most of us. The process of personality development in the child is divided by the psychoanalysts into five relatively separate but temporally overlapping stages. These are called the *oral stage*, which is subdivided into the *oral sucking* and *oral biting*. Here the chief psychological frustrations of the child are those of weaning. This is followed by the *anal stage*, again

subdivided into *anal expulsive* and *anal retentive.* Here the chief frustrations are those concerned with toilet training. This is followed by the *phallic stage,* where the chief frustrations are those concerned with infantile masturbation. In the *latency period,* which follows, the experiences of psychosexuality are largely repressed. At puberty, psychosexuality again emerges at the *genital stage* and from this time psychosexuality remains conscious.

Many students on first learning that the oral and anal stages are called "psychosexual stages" react with disgust. Many critics including the author feel that the names for these stages were ill-chosen. But here again the student and critic must remember the broad way in which Freud uses "sexuality" and his definition of "libido" in terms of all close human love relationships. With this in mind there should surely be no offense taken when it is pointed out that weaning and toilet training have "libidinal" and "sexual" components. Alexander (1940) has recently suggested that a complete revaluation of the concept of sexuality be attempted, reserving sexual to refer only to the genital aspects of behavior. Until this is done the widely used terms of "oral" and "anal" must be retained. Once again the reader is asked to keep the very special meanings of these terms in mind during this and the following chapters.

In the following sections, we shall outline the detailed development of these five stages. For each of them, we shall give (1) the name of the stage of development; (2) the approximate age and duration; (3) the libidinal localization,[1] *i.e.,* the bodily organ where most of the libido is located; (4) the libidinal mode, *i.e.,* the manner in which the libido is expended; (5) the libidinal object, *i.e.,* the object on which the libido is cathexized; (6) the frustration which gives rise to conflict; (7) the conflict complex or nature of this conflict; (8) the changes in behavior resulting from the resolution of this conflict; and (9) the changes in personality resulting from this development. This sequence of data is given schematically in Table 2, which is to be found at the end of this chapter. The reader is asked not to refer to this chart, however, until he has followed the development of the oral sucking stage which immediately follows.

[1] Actually the designation "libido" should always be understood as referring to *libidinal and aggressive* impulses. The nomenclature of the psychosexual theory was pretty well established when Freud introduced the concept of the death instinct. *Cf.* p. 158.

3. The Oral Stage

Oral Sucking.—The first "weaning" occurs at birth. The newborn child reacts to the frustration of being born with the development of the "independence" of breathing and the "responsibility" of having to do so. Otto Rank (1929) considers birth itself the first and greatest universal human frustration. Most psychoanalysts think that Rank considerably overemphasized the importance of birth but all admit that it may have psychological significance. The nervous system of the child is so relatively undeveloped that it probably has less effect than Rank believes. The psychoanalysts have very much evidence, however, that the behavior of the child in nursing and in weaning is of the greatest significance for his personality.

The newborn child is a completely helpless individual. We have reasons to believe him to be very undifferentiated as a person. He is largely *id* in the sense used in the last chapter, and has no idea of the *self*, or *ego*, or *conscience*, or *superego*. His wants are few. He wants to be fed when he is hungry, to be kept dry and warm; and approximately the first eight months[1] of his life are concerned with caring for these needs. He is usually fed at the mother's breast, but even in these modern days when breast feeding is becoming more rare, he is generally fed with warm milk and in close physical contact with the mother. The young child probably does not differentiate clearly between breast and artificial feeding. To begin with, he is primarily a physiological organism. When his stomach is empty or when he is cold or when he is uncomfortable from defecation or urination, this physiological status is translated into the first psychological unpleasantness. Feeding at the mother's breast is the most important activity, both physiologically and psychologically, for the young child. For this reason, psychoanalysts refer to the period from birth to about eight months as the oral sucking period. The libido is located chiefly in the mouth and oral region: the mode of pleasure finding and hence tension relief is sucking and swallowing. The child has no conscious knowledge of his aggressive urges. He is motivated primarily by the erotic drive, which is localized in the mouth, and his first rather diffuse strivings

[1] Throughout this section, the time designations given are the average ones, and one must keep in mind that for the specific individual there is often considerable variation in these.

are for oral satisfaction. For this reason, the child's instinctual life is said to be *preambivalent.* Nor does he distinguish clearly between himself and his mother. His libidinal satisfactions come from his skin and bodily musculature but he has no conscious knowledge of loving himself. His libidinal satisfactions are hence called autoerotic (as opposed to narcissistic). His total attitude is one of passive dependence.

Although some children (low-grade idiots) never progress beyond this stage, the average child is forced by the frustration of weaning to begin to develop a differentiated person structure. About the age of eight months, weaning begins to play an important role in the child's life. He is taken from the breast and some, at least, of his food is gained by other methods than sucking. This is a traumatic experience for the child. He has to begin to develop some self-directed activity other than sucking to satisfy his needs. The first crude ideas of outside reality and the first diffuse ideas of himself as an individual develop at this time. At the same time, he develops his teeth and has for the first time an instrument with which he may exhibit aggressive behavior. Most mothers who nurse their children until the teeth are developed are well aware that at about this time the child shows his dissatisfaction at the frustrations of weaning by biting. In this conflict situation, we have the beginnings of what we shall later call the "Oedipus situation." The result of the resolution of the conflict created by the frustration of the purely passive oral sucking behavior is the development of oral aggressiveness or the oral-sadistic period. This is accompanied by considerable repression. Throughout the oral sucking period, the child is predominantly dominated by the pleasure principle. His personality to begin with is all id in its dynamic aspects and chiefly unconscious in its topographical aspects. At the end of the oral sucking period, the ego begins to emerge and with it consciousness and an extended sense of reality. One must not get the idea that this emergence occurs at exactly eight months or any other definite time. Actually, this is a very gradual process of a dialectical nature.

The chief facts of the early oral period are shown schematically on the chart to be found at the end of this chapter pages (204–206). Columns 1 through 9 give the steps of the psychosexual genesis so far discussed. The reader should next refer to column 1 of the row marked "oral sucking." Columns 10 through 12 will be used in connection with the next chapter and columns 13 through 15 in

connection with Part IV. The author finds that he can follow the complexity of the psychosexual development as described by psychoanalysis more easily on such a chart. To a certain extent, charts such as this are misleading. The process of psychosexual genesis is a dynamic, dialectical one. It unrolls gradually. On the chart, we can only point out certain static situations at certain chosen times. If one keeps in mind the fact of the gradual transition between stages, however, this chart should be very helpful.

Oral Biting.—With the development of teeth, the child can show aggressive behavior and so enters into a new stage of his development. This lasts from around eight months to around eighteen months. Again, the time limitations vary greatly. One must not get the idea that all the behavior of the oral sucking stage automatically disappears at eight months or is completely replaced by the oral biting behavior up to eighteen months. On the contrary, much of oral sucking behavior remains and certain aspects of even the grown personality and the adult character have already been determined at eight months. In the next chapters, we shall see what many of these traits are. For the present, to give only several examples, let us say that all our eating and drinking behavior through life represents the continuation of the oral sucking stage, although its form becomes much changed through environmental influences. Thus, eating and interest in food represent oral characteristics. Likewise, the pleasure all of us get from kissing a loved one on the lips originates in the oral stage.

Although certain adaptations to the oral sucking period remain permanently in the personality, new traits emerge and the personality develops further differentiation with the frustration of weaning. In the oral biting stage, the aim or mode of pleasure finding is in biting as well as in sucking and swallowing. The child is motivated not only by the erotic urges of tender sucking but by the aggressive urges of destroying. He becomes ambivalent toward his mother. He loves her as the source of his satisfaction, but at the same time he hates her, because, to a certain extent, she has neglected him in that he is no longer completely dependent on her. We have seen that the oral sucking child was primarily autoerotic. This autoerotieism continues, but we find with the emergence of the ego the appearance of the early *narcissism*. A child not only loves his body and the comfortable feelings ensuing from it, but he begins to have an idea of himself as an object and part of the libido is directed

to himself. Soon after the development of the oral biting stage, the child is finally weaned from the bottle and forced to play an active role in his own food-getting process. Besides this, he is being trained in habits of personal cleanliness throughout this period. Often, at around this time, a second child appears, and we know that the baby has enough of an idea of reality at this time to be jealous of this second child. The combination of the final weaning, the beginnings of training in habits of personal cleanliness, and the possible appearance of a new child represents the second major traumatic experience. The ego becomes even more differentiated from the id and the child is forced to begin to realize that he is not the center of the world, but that there is outside reality which he will have to meet. The effect of the resolution of this complex leads to the strengthening of the ego and further development of the reality principle as a motivating force, although the pleasure principle is still dominant. In many cases, the feeling of "being cheated" develops. The manner in which the child comes through the late oral period is of the greatest importance for his later personality structure and character. The ego in the development has become at least partially differentiated. More of the topography of the person is concerned with consciousness. The British school of psychoanalysis (for instance, M. Klein and E. Glover, 1928) believe that the beginnings of the superego are formed at this time.

In this way, psychoanalysts attribute much of our later character and personality structure to the frustrations of earliest childhood. We should now have a better idea of what is meant by infantile sexuality. Since our original eating behavior starts out in connection with a libidinal gratification, Freud shows that there are sexual elements even in the process of food getting. From the beginning, the child is a socialized and sexual individual. The evidence, as we saw above, on which our brief outline of the oral stage is based comes from the detailed psychoanalysis of many individuals as well as the supporting observations in many other fields. Those readers who are still incredulous owe it to themselves to read some of the more detailed studies which are referred to in the bibliography appended to this chapter. Table 2 may again help the student to follow the intricacies of the oral biting period. Again, it must be emphasized that the chart is able only to pick out certain cross sections of a static nature.

4. The Anal Stage

The Anal Expulsive Period.[1]—The average student will find it easier to accept the correctness of the psychoanalysts' ideas about oral development that he will those concerning anal development. The oral period is largely concerned with food getting at the time when the infant is very undifferentiated and where the mode of food getting may be modified. The food getting itself may not be completely frustrated, however. Man must eat if he is to continue to live. Even the partial continuations of oral behavior are socially more allowable than those of anal behavior, which we are now about to discuss. Under the proper circumstances, we are all allowed to eat and kiss. Admiration for a pretty mouth is universally acceptable. Our toilet habits are, however, strictly regulated by society. To admit pleasure in defecation is not socially permissible. But we do know that many neurotic and psychotic individuals do get pleasure from the processes of defecation and urination. To admit publicly admiration for the buttocks and anal region is also rarely permissible in our society. Karin Stephen points out that such admiration is quite permissible in some primitive societies and that we have very good reason for believing that the average individual was interested in the buttocks and anal region and received pleasure from urination and defecation during his childhood.

But even the adult receives, under some circumstances, at least a feeling of quite comfortable relief from urination and defecation. All of us have experienced situations when we would like to go to the toilet but where, either through lack of facility or through embarassment, we cannot go immediately. Under such conditions a great deal of visceral tension arises, the relief of which may be actually pleasant. In connection with the oral stage, we saw that the growth of the teeth and the aggressive ability to bite differentiated out of the oral frustrations. The young child to begin with is without sphincter control. The musculature connected with evacuation of the bladder and bowels is at first undifferentiated. Probably the child

[1] Dr. Franz Alexander (in his lectures at the Chicago Institute for Psychoanalysis) is inclined to place the anal retentive period before the anal expulsive period. We follow the designations of Abraham (1927), who first made the distinctions. The mere fact of this slight disagreement between two such eminent psychoanalysts indicates only the overlapping nature of these various periods and the dialectical nature of psychosexual genesis.

only experiences evacuation when the visceral tension is very high, so that the normal act of evacuation may bring to the child feelings of relief similar to those which the adult experiences after extreme inhibition of anal function. Children are not by nature cleanly in their personal habits and must, like puppies, be "housebroken." The anal expulsive period *overlaps* with the oral period and occurs from about six months to three years. In the anal expulsive period the aim or mode of pleasure finding is the expulsion of the feces and urine. But the child comes to perceive that the parents place great weight on the feces and urine being given to the parent under the proper social situation. The child is often told, "Do something now for mother," or "Make sure that you go to the toilet before we go out." Very early, then, urine and feces are seen by the child as something dirty to be gotten rid of, on the one hand, and something valuable to be retained, on the other. Since the ego and sense of reality become well developed at this period, the child comes to feel very powerful in this respect. The morning going to the toilet is so emphasized by many parents that a good bowel movement appears to the child the most important thing in the day's work. It is also something for which he is given rewards. On the other hand, he soon realizes that besides the personal pleasure from urination and defecation and the rewards they bring under the right circumstances, under the wrong circumstances he may use urination and defecation aggressively. All individuals who have children have noted the almost fiendish glee with which children begin to demand the "potty" under circumstances where a suitable place is not available. Many psychoanalytically wise parents realize that bedwetting is at the same time a pleasure and an aggression.

In the anal expulsive period, autoeroticism continues but becomes predominantly anal in its nature. The narcissism of the oral stage continues likewise. The social frustration is in personal habit training. During this period, the ego becomes well established and the pleasure principle activates only relatively little more of the child's behavior than does the reality principle. The child has come to what psychoanalysts call "the level of reality testing." At the level of reality testing, the reality principle is strongly enough developed that the child perceives the consequences of giving in to the pleasure principle under certain circumstances. From this time on in the normal development, pleasurable acts are generally carried out only insofar as they are not completely irreconcilable with

reality. This is an important point to which we shall return later in connection with the distinction between psychotic and neurotic behavior.

In this period come the beginnings of the formation of the super-ego, the exact details of which will concern us shortly. In this period there are also the beginnings of the formation of ideas of sex differentiation in the child's mind, the first realization that the child must turn into a person of a definite sex. The Oedipus situation continues to be the chief conflict situation. The little boy has the first beginnings of thinking of himself as a future man, the little girl has to realize that eventually she will have to turn from the mother to the father. The development of the Oedipus situation is so complicated that we shall deal with it separately after developing the rest of the theory of psychosexual genesis. The effect of the social frustration of personal habit training is the development of the anal retentive stage. In these anal frustrations, we have another experience which may be psychologically traumatic. Through anal frustration, we saw that the individual is forced more and more to face reality. He gets his first ideas of ego responsibility. He must stand as an individual in the family.

The Anal Retentive Period.—Where the child previously gained pleasure from the expulsion of urine and feces, the child now realizes the social value of retaining, controlling, and possessing them. Furthermore, the child's reasoning is different from ours. A child comes to see the excreta as things of independent value. Although it is hard for us to realize it, there are at this time in the child's thinking certain confusions. Children must learn their own anatomies. Thus all the openings in the body are to a certain extent considered equal; the mouth, the anus, and the vagina are not clearly differentiated. All things extending from the body also become confused. Thus the penis, nipples, and feces are unconsciously equivalent. The feces themselves play a dual rule. They are valuable under certain conditions as gifts; under other conditions, they are dirty and may become insults.

Some of this childhood confusion continues into adulthood. The anal region becomes something valuable and beautiful or something repulsive and used to insult. Thus, the insulting factor of flatus is realized among all individuals. Everyone realizes what is meant by "giving the bird" or "bronx cheer." Practically every language has a colloquialism in which the insulted one is asked to kiss the anal

region. On the other hand, in the child, feces properly given represent gifts. Thus, feelings of omnipotence and extraordinary power come from the time when the child first realizes that he can control this all-important process of urination and defecation.

In the period roughly from twelve months to four years, the child comes to personal cleanliness. The final frustration of his anal behavior occurs at around the fourth year. At this time, still another type of psychosexuality is beginning to be active, namely, genitality. The conflict brought about by the giving up of anal pleasures leads to the resolution of the anal retentive period. In the jump from anal expulsive behavior to anal retentive behavior, we have the development of the period of reality testing. The child not only sees reality as something with which he has to meet and as something which is not always friendly, but he realizes that he has to stand alone in a family. He has the first vague realization that not only is he not the center of interest but that father and mother really are perhaps even more interested in each other than they are in him. This is a hard blow for the child to take. He develops into the phallic period, where the "Oedipus" and "castration" situations are worked out and where the child is forced to relinquish infantile sexuality completely. The development of the anal period may also be followed in Table 2 if one keeps the limitations in mind which we have previously stressed.

5. The Phallic Stage

Just as the child has to be brought to personal cleanliness, he has to be brought to wear clothes. Nudism is quite a natural phenomenon with young children. Children learn about sex differences at a very early period. They practically always have occasion to see not only brothers and sisters naked, but also to see mother and father naked. Thus, they come to realize the difference between the sexes. Furthermore, often children see mother and father in sexual intercourse and even if they do not actually observe parental intercourse, they soon come to realize something about it. When they are out of the room or put to bed or forced to go and play, it is obvious that something very interesting occurs between the parents. In the early phallic period, the chief aim or mode of pleasure finding turns from the anal region to the genitalia. Just, however, as we saw that the oral period did not cease to exist at the emergence of

the anal period, similarly, neither oral nor anal periods cease to exist with the development of the early genital period.

The early genital or phallic period develops dialectically out of the anal period. Some analysts even insert another period, the so-called "urethral period," before it. The process of urination is, under certain circumstances, a pleasant one. Furthermore, it is known that urinary visceral tension very often increases the pleasure of sexuality in adults. Consequently, there is probably a period in the life of both the little boy and the little girl where the pleasure of urination is partially anal (in the technical sense of the word) and partially genital.[1] We know from numerous observations by child psychologists that all children masturbate intermittently during early childhood and that masturbation becomes the most important source of psychosexual satisfaction in the fourth and fifth years. The aim or mode of pleasure finding of the early genital or phallic period is through the touching, the rubbing, and the exhibiting of the genitalia. This phallic interest is primarily narcissistic in character. The child is interested in his own genitalia rather than in those of the opposite sex. Most adult males can remember a period in which they indulged in urination contests and were much concerned with the size of their own and their friends' penises. Similarly, most adult females remember interest in the genitalia of both sexes. Very often children of opposite sexes engage in mutual masturbation, where the little boy is concerned with his penis and the size of it and the little girl is concerned with her lack of a penis. All children know by this time that papa has a big penis and that mama has no penis at all. There is a great deal of confusion in the child's mind as to just how the sex organs function. It is, however, realized by normal children at the fourth or fifth year that the story about the stork is a monstrous lie. Children know that the new child comes out of mama, but how it gets in and how it gets out is another problem. In this period, the child begins to have ideas, however erroneous they may be, about sexuality. He masturbates frequently and begins to wonder what the consequences of sexuality are. For the first time, the child must choose an object for the sexual act and this choice naturally falls on the parents or, in some cases, the siblings. This is not because of any hereditary mechanism but because the parents and siblings are in the life situation of the child. Also, the parents are persons of great power and tremendous prestige to the

[1] *Cf.* Ferenczi's fascinating, if highly speculative work, *Thalassa* (1938).

child. The male child, interested in his penis, cannot help but think, "When I grow up, I shall have a penis like father." The female child very often thinks, "When I grow up, I shall have breasts like mother." In this way children overcome feelings of inferiority. Such solutions to the child's feelings of inferiority are not the only possible ones, however. Both little girls and boys wonder why mother has no penis, while father does have one, and the idea which most frequently occurs to them in connection with this is that originally mother did have one but she somehow lost it. Similarly, little girls often think that they at one time had penises but lost them. The male child tends to think of loss of the penis as a colossally unfortunate possibility; the female tends to think of her penis as already lost. This situation in the male leads to the Oedipus situation, the castration complex, and the repression of infantile sexuality. It leads to the same thing in the female, but the sequence of events is somewhat different; we must therefore treat the phallic period of the male and the female separately.

The male has always been dependent on his mother and, when he develops his first ideas of sexuality and its significance, he chooses the mother as a love object. He realizes, however, that the mother is possessed by the father. He sees the father not only as a potential rival for the mother's affection but also as the possible avenger of his desires on the mother. During this time, his masturbation fantasies often contain the mother as a sexual partner. One must not get the idea that the child necessarily has any precise and exact ideas of what coitus means. He does know, however, that the penis is connected with coitus and that coitus is a highly valued and pleasurable act to the parents. The parents feel they must prevent this infantile interest in genitalia and the ensuing masturbation. He is taught by both the mother and the father to stop masturbating, to "take his hands away from there," "not to play with himself." He is often told the horrible consequences of masturbation, that it is bad and nasty, and in some cases he is even threatened with castration. "If you do not stop playing with yourself, I shall cut it off," says either the father or the mother. The situation arises which is known as the Oedipus situation. The boy loves his mother, wants to possess himself of her, but realizes the consequences of becoming a real rival to his father. The *fear* of castration frustrates the infantile masturbation in connection with the Oedipus situation and leads to the repression of infantile sexuality. Since the oral and the anal

components of sexuality are not completely clearly differentiated from the phallic in the child's mind, this repression of the Oedipus situation carries with it all ideas of infantile sexuality. The male child, however, not only loves the mother but identifies himself with the father. When he grows up, he will be like father; when he grows up, he will have a penis like father. Consequently, he *introjects* a part of the father, particularly that part of the father which tells him that he must give up his infantile sexuality. This becomes the *superego*. Actually, parts of the mother have also been introjected in connection with the prohibitions of anal behavior. What we call our conscience is actually the voice of the parents saying, "You shall control your bowel movements"; in other words, "You shall do your duty." It is the voice of the parents saying, "You shall not indulge in masturbation"; in other words, "You shall deny sexuality."[1]

Such a solution to the Oedipus and castration complexes is called the *positive* solution of the problem. This is the normal one and leaves the child in the so-called "latency period," where sexuality remains in the unconscious, so that he may grow up and become civilized and eventually take over the role of the father in his own family. Very often, however, we have the reverse of this process. The male child chooses the father as love object, considers the mother as rival, identifies himself with the mother. In such cases, we have the basis for the development of adult male homosexuality rather than adult male heterosexuality. We shall enlarge on this in Chap. XIX.

By the castration complex, psychoanalysts understand much more of infantile behavior than is shown in the fear of actual castration. The castration complex covers the fears of all sorts of painful retaliation on the part of the parents because of the sexual and aggressive wishes of childhood. The male child, as well as the female, is always bisexual and fears the loss of his father's love as well as the actual punishment by the father for his attachment to the mother. Possessive love in the child leads to jealousy, which leads to imagined aggressions, which lead to the fear of punishment (castration as only one form) for these imagined aggressions and

[1] Actually the child is subjected to many other influences than the parental. Siblings, uncles and aunts, pre-school teachers, and playmates all play a role in the formation of the superego. The influence of the parents is so great, however, that Freud stressed it perhaps even too exclusively.

fear of loss of the love of the one who is the object of the aggressions. The castration complex refers to this whole behavioral situation. Freud called it the castration complex because in its most severe pathological manifestations it is always actual castration which is feared. Although actual castration may rarely be threatened in our society, in some societies it is not only threatened but practiced. That adult males place a higher value on their sexual organs than on any other is so obvious a fact to the honest individual that it needs no particular demonstration.[1]

The outcome of the Oedipus and castration situations in the female is of the same import as it is in the male but follows a slightly different sequence. The female also develops superego, which prevents her from continuing to indulge in infantile masturbation and which protects her against sexuality until society permits it after the period of adolescence. In general, we may say that the little girl reverses the procedure in that she has masturbatory fantasies about the father and considers the mother the potential rival. It is the mother's warning voice which is incorporated into the mind of the girl through the process of introjection and becomes her superego. The first libidinal cathexis, however, for the little girl is the same as for the little boy. In the oral and anal stages, it is the mother more than the father who is the source of all good things in her environment. Consequently, we see that the Oedipus situation in the female starts out with a love of the mother. The same interest in sexuality which characterizes the little boy, however, characterizes the little girl. She also wonders as to why she is different and why she has no penis. Adler has pointed out that it is normal for the little girl to have a *penis envy*. At the urethral period, she also gets sexual excitement through urination and begins infantile masturbation. Her growing knowledge of sexuality convinces her that she may no longer choose the mother as a sexual object, but now must choose her father. Unconsciously, a penis may have the same value as a child. Thus, the girl begins to see in the possibility of having a child a compensation for her loss of a penis. Her masturbatory fantasies, then, are concerned normally with imagined intercourse, but again one must not suppose that the child knows precisely what happens in intercourse with the father or that as a result she will have children. Most little girls at this age not only want

[1] For a good review and somewhat different treatment of the castration complex, compare the paper of Alexander (1935).

children, but if allowed to express their desires want many children. The repression of the Oedipus situation through the fear of its consequences occurs much more slowly in the girl child than in the boy. The girl child is also taught that she must give up her infantile masturbation because of threatened loss of love if she continues it. The superego in the girl in the normal outcome of the Oedipus situation, then, is the mother identification through introjection. The voice of the conscience is the carry-over of the voice of the parents saying, "You must be clean anally; you must do your duty," and the voice of the parents saying, "You must stop your infantile masturbation, you must give up sexuality if later you are to have children." Thus, as the male conscience makes the individual active and dutiful and causes him to inhibit his sexual functions to fit into the rules of society, the female conscience does the same thing.

As the little boy may go through the Oedipus situation in a negative fashion, so may the little girl. In this case, the little girl wants to be like her father and identifies herself with her father in order that she may love or be loved by someone like her mother. This is important in the development of female homosexuality and we shall return to it later.

The Oedipus and castration complexes of girls are not nearly so well understood as those of boys. We have developed the theory along the lines that Freud, himself, adopted. Freud's theory of female sexuality has been widely and probably correctly criticized. There is probably more controversy as to the exact sequence of the development and resolution of the female Oedipus situation than on any other theoretical point in psychoanalytic literature. In a book of this nature, we cannot go into the details of these controversies. In the bibliographical note appended to this chapter, references to the literature are given.

As in the case of the oral and the anal periods, certain aspects of phallic genitality continue in the structure of the adult personality and the adult character. In the next chapter, we shall give many examples of these.

6. The Latency Period

From the fifth to the seventh year, because of the fear of the social consequences, infantile sexuality is gradually repressed, and for a period of about five or six years the individual is not consciously concerned with sexual matters. Such repression as occurs in the latency

period is seldom complete and is never sudden. All of us can remember some interest in sexuality through this period. At the age of thirteen or fourteen, sexuality emerges again. Before psychoanalytic theory, it was considered that sexuality was a slowly maturing part of the personality and had its first emergence at this time. The period between five years and puberty is called the "latency period." In this period, the infantile sexuality is repressed and reaction formations strengthen this repression. The libidinal urges are sublimated in the process of education. This period is that of the most rapid formal learning. Most children undergo all the schooling they are to receive in this time. But, perhaps of even more importance, they learn how to behave in society and to have ideals. Eroticism and narcissism decrease in the latency period, but libidinal attachments to parents, teachers, and friends continue although there is little overt libidinal striving toward them. The little boy rarely thinks during this period of kissing or playing affectionately with his schoolmates. Some disguised libidinal energy gains outlet through "roughhousing" and in all sorts of games. But the little boy is embarrassed by show of affection on the part of his parents, particularly in public places. He seems, on the surface, to be without heterosexual or homosexual libido. The same is true of the little girl, although she gets into the latency period at a later time and emerges from it earlier than boys do. Girls generally are more affectionate through this period than are boys. The psychoanalysts explain the reason for this in that the girl has accepted her castration whereas the boy still fears his. Some individuals never really give up their infantile masturbation. Some boys know all about sex and think about sex during this period. Some girls do likewise. Otherwise, we could not account for either the sexual perversions or the development of certain forms of erotic behavior in adulthood. Studies of social anthropologists show us that this latency period is not inherent in biological nature, but is rather an artifact of our particular patriarchal civilization. In some cultures, there is no latency period. Our culture, in which the educational process is so important, requires it.[1]

The repressed libidinal urges remain sources of unconscious conflict. In order to prevent the strong libidinal urges from becoming conscious, it is necessary to develop reaction formations against them. Reaction formations occur in the development of what for lack of a

[1] *Cf.* Margaret Mead (1932) and Anna Freud (1929).

better term may be called the "Sunday-school mind." Children through this age are very goody-goody, prudish, and apt to criticize any of the social "vices" of their parents, like smoking, drinking cocktails, and the use of make-up. They become girl and boy scouts, do a good deed every day, and feel very superior morally.

In the story of Snow White we have a beautiful allegory about the latency period. Let us review the story briefly. Snow White is a beautiful child princess whose widowed father has taken a second wife. This second wife is the "fairest lady in the land" and is possessed of a magic mirror which convinces her of this. As Snow White grows a little older, however, the mirror warns the stepmother that Snow White will become more beautiful than she. This excites the queen's envy and she plans to have Snow White done away with. She gives Snow White into the hands of a huntsman, commanding him to kill the child. Snow White prevails upon the huntsman, however, to free her in the woods, where she is taken care of by seven little dwarfs who work underground. The stepmother learns from the mirror of Snow White's continued existence with the dwarfs and tries again to kill her. After several unsuccessful attempts, she succeeds, not in killing Snow White, but in putting her into a comatose state. The dwarfs, however, keep Snow White in a beautiful coffin for seven years. She does not die but remains in a deep unconscious sleep. At the end of seven years, the wicked queen is dead and the fairy prince comes with a sword with which he opens the casket and takes Snow White to be his bride.

A complete analysis of the Snow White fantasy would take us rather far afield. We wish merely to concentrate on showing that the Snow White fantasy is simply a fairy story about the latency period. The central theme of the story is quite obvious. Snow White awakens after a long sleep and is free to marry the prince. In the long sleep, she is guarded by seven dwarfs. These seven dwarfs represent the seven years of the latency period. They are dwarfs, underground creatures, indicating that Snow White, *i.e.*, female sexuality, is underground, in the background, or repressed for seven years. The actual awakening is brought about by a prince bearing a sword, with which he raps on the coffin. The prince is the symbol, of course, of masculine sexuality, the sword representing the penis. After the seven-year sleep, *i.e.*, after the latency period, Snow White can be happy and marry the prince. After the latency period, sexuality is again permissible.

But what put Snow White to sleep? In this case, it was the jealous stepmother, the queen. Actually, of course, in psychoanalytical theory, it is the true mother, the rival for the father's affection. Undoubtedly in the original storyteller's mind, the reaction formation against attributing hostile influences toward the daughter by the real mother was so strong that a stepmother was chosen to play this role.[1] The situation is that of the normal married relationship of father, mother, and child. In dreams and in fairy stories, kings represent fathers, queens represent mothers, and princes or princesses represent the children. The jealousy of the stepmother represents the probably normal feeling in this story of an older woman approaching the period when she must renounce her own sexuality. At all events, mother-daughter jealousies occur quite as frequently in real life as they do in fairy stories. The huntsman who is commanded to cut out Snow White's heart represents the threat of castration in this story. This analysis is easy because the equivalent of heart and sexuality is one which occurs in practically every language in the world. The phrase, "I give my heart to you," is a euphemism indicating a real or wished-for surrender in the sexual sphere. The pleading on Snow White's part with the huntsman represents the renunciation of sexuality in the face of the castration situation. "If I live with the dwarfs (*i.e.*, if I give up sexuality) for this period of time, then I can still go on living (*i.e.*, I can preserve my sexuality until later)." The subsequent visits of the queen in disguised form and the attempts on Snow White's life by the queen may be taken to represent the fact that the latency period, particularly in females, is not brought about by a single traumatic situation but rather occurs over a period of time.

If we attribute the symbolic value of the family in general to Snow White's family and the symbolic value of female sexuality to Snow White herself, the fantastic meaning of the tale is apparent. The immense popularity of fairy tales of this sort with children is due to the fact that the children, at least semiconsciously, make the symbolic identifications to which we refer. If Snow White were an isolated fairy story on this theme, one might think that the resemblance between the story and the actual events of the latency

[1] In the greatest English literary creation about the Oedipus situation, Shakespeare's *Hamlet*, the protagonist fights the stepfather, not the father. This is an example of artistic distortion through sublimation.

period was completely fortuitous. The same type of symbolism, however, with regard to the inner personal relations between members of the family and in the family situation is the basic structure of all fairy tales. A little consideration of various fairy tales in the light of what the reader now knows of psychoanalytic theory will convince him of the truth of this statement. The chief points about the latency period are summarized in Table 2. These may be again viewed only as a picture of the average static cross section at about nine years of age.

7. The Genital Stage

At the age of puberty one gets the gradual revival of all of the infantile sex stages. In the normal case, the revival of the phallic stage predominates but gradually this phallic interest turns into real genital interests which are less infantile than those of the phallic stage. Revival of oral and anal interests also occur. Children begin to show an interest in kissing and in games like post office. They have a decided revived interest in anal stories and anal behavior. It is actually *in* the boy scout troop very often that the individual boy learns the four-letter Anglo-Saxon words. The threat of castration still lies heavily over the individual, however, and the first object choice is usually homosexual. Most boys at this age engage either in mutual masturbation or in social masturbation. By social masturbation is meant masturbation in the company of others. The fact that attachments are homosexual at this time is not due to any inherent biological nature, but rather is due to our social mores in segregating our children at this age. At first, there usually develops a feeling of antagonism toward the opposite sex. All of us remember the disdain with which we viewed the first of our "gang" to become "girl crazy." All of us remember the embarrassment which we felt about our first puppy-love affairs. Gradually, however, society allows the outlet for sexual behavior at the adult level. Such an outlet is not established at once. Kissing games and necking parties become quite permissible, provided they do not go too far. Interest in dirty jokes becomes part of the process of adolescence. The first love affairs remain phallic rather than truly genital in nature. In the phallic phase, as we saw, the narcissistic components are particularly strong. The individual is chiefly concerned with himself as lover. In the true genital phase, this narcissism is replaced by real object love: the individual is

chiefly concerned with the love object. The adolescent individual is concerned with satisfying his own sexuality rather than with giving love. The boy wishes to convince himself that he is a man, or the girl wishes to convince herself that she is a woman. Gradually, however, around eighteen to twenty years, true adult normal heterosexuality emerges. The individual who arrives at this is allowed by society to start an actual sexual relationship and start the familial history over again. This development may, again, be followed in Table 2 if the limitations we have continually stressed are kept in mind.

8. Summary: Résumé of the Developmental Process

The Freudian theory of psychosexual genesis is very complex. By the time we have discussed normal behaviors conditioned in the process of psychosexual genesis, which we do in the next chapter, and the light which this theory throws on the psychiatric syndromes, which we shall do in Part IV, the reader will undoubtedly understand it more clearly than he does now. At the present time, it may help to clarify the theory of psychosexual genesis to give a résumé of the chief frustrations and their resultants in a somewhat condensed form.

In every normal life, there are four chief frustrating experiences, experiences in which the individual has to give up a mode of adjustment which was satisfactory to him and accept a new type of adjustment. In each such readjustment, the individual accepts more responsibility but he gains more independence. With the acceptance of reality and responsibility come privileges and rights and power, so that one must not look on frustration as a negative process. With these frustrations comes also the differentiation of the personality and the development of special abilities. The first great frustration is the frustration of the passive oral feeding habit. The infant is happy, the center of attention, taken care of, everything done for him: psychobiologically he is in a state of either continual equilibrium or easy return to equilibrium. The frustration of adjustment through weaning leads him to differentiate something of his ego and to realize that there is an outside world.

Even after he has developed his ego, however, he has no ego responsibility. He simply has to be more active and less passive. Finally, the frustrations at the anal level lead him to develop ego responsibility. This is perhaps even a greater frustrating experience

TABLE 2[1]

Theoretical normal development

Name	Age	Libidinal localization	Libidinal mode	Libidinal object
1	2	3	4	5
Oral sucking	Birth to 8 mos.	Mouth, lips, tongue	Sucking, swallowing Introjection Preambivalent	Autoerotic Passive, dependent
Oral biting	6 to 18 mos.	Teeth, jaws	Biting, devouring, destroying Sadistic introjection Ambivalent	Autoerotic and narcissistic Oral-sadistic attachment to mother
Anal expulsive	8 mos. to 3 yrs.	Anus and buttocks	Expelling, rejecting, destroying Projection Ambivalent	Continued narcissism and anal attachment to parents
Anal retentive	12 mos. to 4 yrs.	Anus, buttocks, sphincter control Urethra	Retaining and controlling feces and urine Ambivalent	Continued narcissistic and anal-sadistic attachment to both parents
Phallic	3 to 7 yrs.	Urethra and outer genitalia Clitoris and penis	Urinating Infantile masturbation Ambivalent	Oedipus choice on ambivalent level
Latency	5 to 12 yrs.	No new zone Old zones denied	Repression and reaction formation	Decline of autoeroticism and development of social feelings
Genital	12 to 20 yrs.	Genitalia	Coitus Postambivalent	First homosexual crushes, hero worship, then heterosexual sex objects

[1] This table was combined with some modification from the similar ones of Abraham (1927), Healy, Bronner, and Bowers, Rickman (1928a), and an unpublished table of W. C. Menninger.

TABLE 2.—(*Continued*)

Theoretical normal development

Frustration conflict	Complex	Behavioral results	Structural results
6	7	8	9
Weaning	Beginnings of Oedipus complex Mother choice of both sexes	Development of oral aggressiveness Ambivalence	Pleasure principle overwhelmingly predominant Practically all id and unconscious
Final weaning New child	Continuation of ambivalent Oedipus complex Mother choice of both sexes	First consciousness of reality Feeling of being cheated Anal interest	First development of reality sense; emergence of ego and conscious
Necessity of sphincter control	Continuation of ambivalent Oedipus complex Realization of sexuality Both sexes conscious of father	Social reality Feeling of power Development of sphincter control	Reality of growing importance Ego definitely developed Beginnings of superego (level of reality testing)
Need to accept social reality and complete sphincter control	Castration in girl Beginnings of positive Oedipus in boy	Development of interest in genitalia	Reality overbears pleasure Ego development essentially complete Beginnings of identification and superego
Threat of castration for infantile masturbation	Castration in boy and renunciation in girl	Repression of infantile sexuality	Reality established Superego complete Id repressed into unconscious
Behavioral problems of late childhood	Superego conflicts of late childhood	"Boy and girl scout" behavior	Establishment of superego
Puberty	Adolescent homosexuality	Adolescent masturbation Interest in opposite sex	Reemergence of pleasure principle and id drives Personality complete

TABLE 2.—(*Continued*)

Normal behavior formation			Symptom formation		
Continuations	Sublimations	Reaction formations	Psychosis or neurosis	Perversion	Character defect
10	11	12	13	14	15
Drinking Eating (chewing) Smoking Kissing Oral hygiene, etc.	Wine tasting Epicureanism Oratory Wit Sarcasm, etc.	Food faddism Dislike of milk Prohibition enthusiasm Purism in speech Continual visiting of dentists, etc.	Schizophrenia Manic-depressive	Passive oral-inversion Active oral-sadism	Schizoid Narcissistic Infantile Cycloid
Interest in daily bowel movement Constipation, diarrhea Erotic pleasure in defecation "Chic Sale literature," anal stories, etc.	Painting Sculpture Philanthropy Statistical studies, etc.	Disgust with feces Excessive fear of dirt Prudishness Pedantry Parsimony Petulance, etc.	Paranoia Compulsion neurosis	Passive anal-inversion Homosexuality Active anal-sadism	Paranoid Compulsive
Masturbation Narcissistic dating Petting Dirty jokes Dancing, etc.	Love poetry Acting Sacred love, etc.	Puritanism regarding sex Modesty, etc.	Anxiety hysteria Conversion hysteria	Phallic narcissism Exhibitionism, voyeurism Nymphomania Satyrisis	Neurotic Hysterical
The continuations, sublimations, and reaction formations of the latency period include all the others in a socially modified form.					
Normal sex life	Renunciation of sex for art, science, society Rejection of sexuality	Socially constructive work	At the genital level there are no symptoms found		

than the first. The first leads him to realize that he has an ego, that he is someone. The frustration at the anal level forces him to realize that he has to do something about it, that he has ego responsibility, that he is not the center of the world but only a part of it, that he stands as an individual. He is forced to see that adjusting to social and physical reality is as important a part of the scheme of things as is the pursuit of pleasure. His ego is virtually completed at this time.

The next great shock is that of phallic frustration. The individual is already partially socially responsible but he still derives all his erotic satisfaction within the family. He only has to meet the reality of the family world until this time. Ego responsibility has been developed but not superego responsibility. We raise our children in the intimacy of the family situation and suddenly tell them that they can have no real libidinal satisfaction in this. This is a colossal blow to the ego's self-regard and it requires a colossal expenditure of psychic energy to establish a new equilibrium. This new equilibrium is established through the resolution of the Oedipus and castration situations. As the oral stage led to the development of a sense of reality and the beginnings of the ego, and as the anal stage led to the development of ego responsibility and a more developed sense of reality, the phallic stage may be said to lead to the development of superego responsibility. The individual now must stand alone within society and the world at large rather than the immediate family.

The next great frustration is that of adolescence. Even before psychoanalytic theory was established, it was known how important adolescence was in developing the personality. The family circle and family ties must at this time be broken. The individual must accept complete sociosexual responsibility as well as ego and superego responsibility. Freud's great importance with regard to adolescence was in pointing out that the roots of adolescent conflict go back to the infantile period. Growth and education are the processes whereby the completely passively independent, undifferentiated, unconscious id of the baby grows to be the highly differentiated responsible, conscious personality structure which contains the ego, id, and superego of the adult. This growth is a gradually developing, dialectical process. An adjustment at any level is replaced by a new adjustment on repeated frustration. The four frustrations we have just described, namely, oral, anal, phallic, and

genital, are not the only frustrations the individual has to meet. He must learn to walk, to talk, to do his schoolwork, and a host of other things, but they are, as should be clear now, of a peculiarly severe nature in our culture and occur at critical stages in the individual's life.

Bibliographical Note

The problem of the evidence for psychoanalytic theory is nicely handled in Hendrick.

The theory of psychosexual genesis was first stated in Freud (1930*a*). It is basic to the whole theory and all the literature (*cf.* Chap. IX) refers in some way to it. Particularly good are the books of Anna Freud (1937) and Karin Stephen. Money-Kyrle relates the specific psychoanalytic theory to biology and psychology. Besides Freud, the most important original contributions on psychosexual genesis are those of Abraham (1927), Ferenczi (1916), and Jones (1923). The differences of opinion concerning the development of female sexuality are indicated in the works of H. Deutsch (1925), Horney (1937, 1938), and Freud (1933*b*). Dooley (1938) gives a summary and review.

CHAPTER XI

PSYCHOANALYSIS: THE CONDITIONING OF NORMAL BEHAVIOR

1. The Effect of Infantile Sexuality on the "Normal" Adult Personality

In the present chapter we shall see how certain traits and behaviors of the "normal" adult personality result from the stages of psychosexual development through which we all must pass. We put the adjective "normal" in quotation marks because, in terms of dynamic psychology, no sharp line is to be drawn between the concept of normality and that of abnormality. Some of the modes of behavior and traits of character which we shall mention in this chapter will be looked on by many individuals as being definitely "abnormal." Psychiatrists on the other hand consider many of these behavior modes and character traits as being rather "normal" in that they appear frequently in relatively well-adjusted individuals. Let us give a few examples. Sadism is present in the infantile period of all of us. It is usually repressed after this stage of development but it may break out later in quite disguised forms. Many schoolteachers, although consciously claiming to abhor the necessity for using the rod, gain some sadistic satisfaction from spanking their charges. One can see that the behavior in which the schoolteacher spanks the child and justifies it to himself through the child's naughtiness is difficult to differentiate except psychologically from sadistic flogging, in which the individual realizes some conscious sadistic satisfaction. Although psychiatrists would like to see both forms of corporal punishment relegated to the past, both still exist and probably will continue to exist in some individuals. Normal object libido is sometimes displaced to definite parts of the love object. Such displacement is called fetishism. One form of fetishism which is not exceedingly uncommon is the so-called "tooth fetishism." There are cases on record of individuals who paid prostitutes large sums of money for the pleasure experienced in extracting their teeth. Everyone will agree that such behavior is abnormal. Had these individuals gone to a dental school and done this in a

socially acceptable fashion, the behavior would not have been looked on as abnormal. Similarly, extreme prudery is often a reaction formation against sexual urges. Members of the antivice societies, in seeking amoral passages in literature, satisfy the prurience of their own minds and engage in aggressive behavior. Whereas we may look on them in terms of dynamic psychology as distorted individuals, it is by no means sure that society at large does not consider them to be crusaders in the cause of right. It is very difficult to draw the dividing line between such behaviors as extremely biting polemics and the abnormal language insults of the manic-depressive patient in his manic attack. Since no sure criteria are to be set up to distinguish between normal behaviors conditioned by the frustrations of infantile sexuality and abnormal ones, we must select rather arbitrary criteria. Very often individuals who are suffering from exaggerations or perversions of the infantile sex drives arrive at adjustments which are socially quite satisfactory. For them it is often inadvisable even to suggest psychiatric aid. Others, however, arrive at adjustments which are antisocial and dangerous, where psychiatric aid is decidedly indicated. In Part IV we shall study the behaviors which are recognized by society to be abnormal and antisocial, so that the individuals performing them must be segregated from the rest of society, and also those defects by which the individual himself is made so unhappy that he asks the aid of the psychiatrist. In this chapter we shall discuss some of the behaviors which society on the whole looks on as not only normal but sometimes even desirable.

In Chap. IX we saw the various mechanisms by which the internal tensions created by conflict were resolved through personality restructurization. In Chap. X we saw that not all the energy connected with the original basic urges could be frustrated, suppressed, repressed, or held back. Some of the energy continues in either its original form or in a socially acceptable modification of this. Many of our modes of behavior and many of our character traits may be looked on as *continuations* of the infantile psychosexual stages. Another way which we have of utilizing the basic urge energy as adults in society is through the process of *sublimation*. We defined sublimation as the utilization of libidinal and aggressive energy in a socially acceptable channel. There is no absolutely clear division to be drawn between the process of continuation and that of sublimation. Sublimation is an unfortunate word, because

it is usually thought of in an evaluative connotation. We shall use *continuation* for behaviors or character traits in which the relation of the behavior or trait to the infantile behavior is obvious (or at least obvious to the psychopathologist) and *sublimation* when the original infantile significance is more distorted in its adult expression. Thus sexual daydreams or fantasies which are engaged in by all adults surprisingly frequently will be looked on as a continuation of phallic genitality. The writing of scientific treatises, on the other hand, is a behavior which often derives from infantile sexuality but must be classified as a sublimation. Love poetry, of course, falls somewhere between the two. If it is good poetry one might call it a sublimation, whereas if it is bad poetry one might call it a continuation.

Besides continuations and sublimations, *reaction formations* play a constant role in normal behavior. Reaction formation is the process through which one protects himself against the consciousness of infantile sexuality by adopting a diametrically opposed type of behavior or by adopting antithetical character traits. Thus, we shall see, overcleanliness or overemphasis on order and punctuality or excessive attention to duty may be reaction formations against the anal stage of infantile psychosexuality. While regular eating may be considered a continuation of the oral sucking stage and epicureanism a sublimation of it, vegetarianism may be considered a reaction formation against it. Likewise, erotic fantasy may be considered the continuation of phallic genitality, schemes for social justice sublimations of it, and chastity vows reaction formations against it. In Table 2, in the columns "Normal behavior formation," examples of continuations, sublimations, and reaction formations for each of the stages of psychosexual genesis are given. The same limitations must be considered in respect to this part of the table as for the others. Again let us stress that the process of psychosexual genesis is one of dialectical growth. The normal behaviors and normal character traits so listed are not established only at the stage in question, but rather chiefly at that stage. This table also contains an outline of the chief psychiatric behavioral categories with reference to infantile sexuality, which will be the subject matter of Part IV. Those readers of the book, however, who already have some knowledge of psychopathology may find it useful at this point to compare the relationships between "normal" behaviors and those of the various psychiatric categories.

As students are sometimes disgusted with reference to oral and anal sexuality, they are likewise disturbed by the concepts of "oral traits and behaviors" and of "anal traits and behaviors." It is indeed disturbing to hear that the manner of infantile nursing and toilet training influences much of "normal" adult behavior. Undoubtedly some psychoanalysts have written of this influence in a rather offensive way without making clear just what this influence is. As the human infant develops ego and superego and adapts to the real physical and social world, his behavior and personality are, of course, radically altered. But the core of the personality remains that laid down in childhood. Thus, no matter how different superficially dining in a banquet hall is from nursing at the mother's breast, both of these acts fulfill biological needs in a social setting. The psychoanalyst simply claims that human psychology shows continuity from birth to death. The reader is asked to keep in mind during this chapter that "anal trait" or "oral behavior" simply means that the trait or behavior in question occurred at the oral or anal level in its most primitive form despite subsequent experiential modifications.

2. Normal Behavior and Character Traits Derived from Oral Sexuality

Oral incorporation of objects may be considered as a continuation of the oral sucking stage. Some of these we consider quite normal, such as the intake of food and drink and, under some circumstances at least, kissing. Others are quite abnormal. Eating feces or drinking urine, which sometimes occurs in the psychoses, the extreme overindulgence in food of the glutton, the extreme overindulgence in alcohol of the drunkard, or the introjection of the penis orally, as in fellatio, belong in the abnormal category. Between the forms of behavior which are quite obviously normal and those which are quite obviously abnormal there are many intermediate forms, where the normal or abnormal status is not so clear. Thus, peculiarities of the appetite, such as for only very strongly spiced types of food, the ability to drink only very cold or very hot beverages, mild overeating and overdrinking, and insertion of the tongue in the oral cavity of the loved object are illustrations of such intermediate forms.

Such oral incorporations, which are continuations of the oral sucking period, are, of course, highly modified through societal frustrations and through the mores and customs. The average

individual, however, puts not only food and drink into his oral cavity, but usually many other objects. Thumb sucking, pencil sucking, lip pursing, and whistling are ways in which the normal adult satisfies his early oral sexuality and diminishes tensions connected with it.

Among oral sublimations we may mention the delight which the good speaker has in the movement of his lips. The type of oratory which is particularly flattering, optimistic rather than pessimistic, may be considered as deriving from the oral sucking period. Epicureanism, wine tasting, and all general dilettantisms with regard to oral behaviors are also sublimations of the early oral behavior.

Vegetarianism and food faddism are, however, general reaction formations against oral sexuality. Many prohibitionists are individuals whose oral satisfactions are denied but who are activated by a sadistic aggressivity against the oral pleasures of others. The simple teetotalers often are motivated by reaction formation against oral satisfaction. Likewise, we have reaction formations against smoking and reaction formations against kissing. In extreme cases such reaction formations are obviously pathologic. Thus one finds definite inhibitions of kissing and smoking in some individuals.

Not all oral continuations, sublimations, and reaction formations are definitely set in the oral sucking period, however, and many of these are determined in the oral biting period. A complete list of normal continuations and sublimations and reaction formations against oral sexuality would include all the uses to which we put our lips and oral cavities. The behaviors first catalogued above are only examples. Since the first taking of nourishment occurs concomitantly with the first libidinal relationship there are oral factors in all successive nourishments as well as in oral lovemaking.

It will be remembered that the oral biting stage of psychosexual development is instigated by the frustrations in connection with weaning. Like all the stages in the psychosexual development, this relationship is a dialectical one. The maturation of the teeth leads to aggressive behavior on the part of the infant, making it necessary for the mother to wean the child. The disappointments of weaning lead to further development of aggressivity on the part of the child. Consequently, around the eighth month the child has developed the first signs of ambivalent behavior. The previous passive attachment to the mother is replaced by one which is both passively erotic and actively aggressive. Chewing, of course, occurs first at this time and all the eating habits of the infant are changed.

If we consider drinking habits with all their modifications as primarily normal continuations of the oral sucking period, eating habits become the most important continuations of the oral biting period.

The movement of the jaws and the development of the teeth and gums in learning to chew are essential also to the development of speech. The first spoken words occur during the development of the oral biting period. The relationship between language and eating is clearly indicated in many of our popular expressions concerning speech. Thus, for instance, one speaks of a "biting" remark, and the facial grimaces which often accompany sarcastic and polemical attack even make some use of the whole muscular habits connected with biting. We also speak of "chewing it over," not only in the sense of making a decision but also in the sense of working out theories in a scholarly work. Therefore continuations of the oral biting period include not only our eating habits but also such habits as gum chewing, tobacco chewing, fingernail biting, introjection of pencils and other objects into the mouth, and chewing on pipe stems.

Polemical literature, oratory, wit, and sarcasm are normal sublimations of the oral biting phase. Also connected with the idea of devouring is the type of devouring which is done with the eyes. Some individuals are unable to take their eyes off other individuals, some are omnivorous readers, some have a drive to possess everything about certain subject matters by reading, and all these activities are related to certain sublimations of the oral biting period.

As reaction formations against the oral biting period and oral sadism we find the development of extreme modesty in speech, the verbal purisms of all sorts, inability to speak rough words, or inability to speak in a "biting" fashion. In this connection, also, we find all sorts of faddisms with regard to eating habits. Many vegetarians, on analysis, are found to have a strong fear against the outbreak of their oral sadistic behavior, which at one time was virtually cannibalistic.

Thus even within the first year some of the outstanding characteristics of the total personality are established. In some individuals the extreme passivity of the oral sucking stage is never overcome, and the individual does not develop enough oral aggressive behavior. Such characters are inclined to take a very passivistic relation to social reality, to consider that the world, like their one-time mothers, owes them a living and should do everything for them

and are inclined to show an optimism which is often unwarranted by social reality. We use the expression "weaning" not only in the literal technical sense but also the figurative sense and consequently speak of these individuals as never being properly "weaned." In other words, they are unable, due to the overfixation in the early sucking stage, to stand up for themselves. When we come to the problems of psychiatry we shall see that many alcoholics and other narcotic addicts are extreme examples of this group; so are most schizophrenics.

If unwarranted optimism is typical of individuals strongly fixated in the oral sucking period, unwarranted pessimism is the oustanding trait of individuals who have never properly resolved the frustrations of the oral biting stage. While the optimistic early oral character is inclined to think that the world owes him a living without his doing anything about it, the oral biting character is inclined to interpret the whole world not as the satisfying mother but as the mother who has weaned him. Thus, instead of parasitic, easygoing, happy-go-lucky individuals, we find many people whose total reaction is one of pessimism and oral aggressivity. They are the individuals who always make unpleasant remarks, who are always skeptical of the motivations of their colleagues, who consider the world a poor place and society as their ever-present enemy. In extreme cases this pessimism may go completely out of normal bounds and become deep depression. And so we shall see that most manic-depressive psychotics show the presence of strong oral biting fixations.

3. Normal Behavior and Character Traits Derived from Anal Sexuality

In the normal development soon after weaning, and sometimes before, steps are undertaken to train the child in proper toilet habits. As we pointed out in Chap. X, we may think of the smooth musculature of the young child as slow to react to increasing visceral tension, and quite normally in the life of the young child both defecation and urination lead to a pleasurable release of visceral tension. In other words, the child has not only an interest in his bed-wetting and bowel movements, but he develops certain erotic gratification from them. This erotic gratification has to be brought under social control. Just as the child has to learn to eat in a certain way, at certain times, so he must learn to use the toilet in a

certain way at certain times. Even after the development of complete sphincter control by the child, however, this interest in the bowel movement is kept up by the parents. To the child of two years, the most stressed activity in the normal day's regime is the daily bowel movement. It not only becomes synonymous with doing one's duty in the popular sense, but becomes practically the chief duty which the individual must perform. It is small wonder that it becomes an important aspect of the total psychological situation of the child. Normal continuations of the anal expulsive period include an interest in the bowels, bowel habits, and daily bowel movements. Clinical medicine now asserts that the regularity which most civilized individuals demand from themselves in this connection is quite unnecessary; it is in fact a continuation of infantile anal sexuality. Some individuals are so concerned with the bowels that this interest becomes central to their personalities. In this way psychoanalytic theory is closely connected with the study of internal medicine. As continuations of the anal expulsive period we find not only interest in the bowels and bowel movements but in some cases a real continuation of erotic pleasure in defecation. Furthermore, the interest in dirty jokes which are connected with anal behavior may be so interpreted. Nearly everyone has laughed at "bathroom" humor. Bathroom humor is very much inhibited in certain segments of society and in certain countries, but is taken for granted in others. In South Germany, for instance, a standard vaudeville act which occurs on nearly every bill is one in which the suspicious husband empties a chamber pot on the lover about to enter the wife's bedroom on a step ladder. The many laughs that millions of Americans had from Chic Sale's essay, "The Specialist," fall in this category also. There has recently circulated a pamphlet called "Gems of American Architecture." In this pamphlet are photographs of a dozen or so outhouses named with trade names and including brief descriptions of their particular qualities. Most Americans who do not have severe reaction formations against anal sexuality consider this type of publication witty. In nearly every country flatus is considered to be a somewhat funny insult. Anal expulsive behavior displaced upwardly is found in the "Bronx cheer," "giving the bird," and in "belching." These behaviors are all equivalents for actual flatus, which is socially taboo.

Important sublimations of anal expulsive behavior are found in the plastic arts. Feces have an extreme value to the child and in the

child's mind are easily identified with gifts, particularly money gifts. Philanthropy thus may be considered as a sublimation of the anal expulsive period, just as we shall see hoarding of money may be considered a sublimation of the anal retentive period. Although the student will find it hard to believe, to the psychoanalyst there is an undoubted causal connection between the constipation, the hoarding, and the philanthropy of certain great capitalist philanthropists.

In order to develop proper toilet training in the child at all, the parent must build up in the child's mind the idea that feces and urine are dirty. It is known, for instance, that among primitive people, the Sioux Indians, for example,[1] where toilet training of the civilized sort is never instituted, there is no feeling that feces are particularly dirty or have an offensive odor. These arise as reaction formations against the anal sexuality and urine and feces.

Just as the failure properly to resolve the oral stages of psychosexual genesis may result in marked types of character, failure at the resolution of anal conflicts leads to definite constellations of character traits which we call the anal character. Freud (1924*a*, Vol. II) and Abraham (1927) first pointed out that in many individuals we find a combination of peculiarly marked interest in money, plus an excessive devotion to detail, plus an unevenness of character which gives rise to easy outbursts of rage. These three character traits, of parsimony, pedantry, and petulance, are according to Freud the basic traits of the anal character. Individuals having the anal character usually show a type of megalomania which is connected with their feelings of power through the control of the anal functions; this leads them to attempt great deeds, which very often because of their pedantry and their surliness and their stinginess they are not able to accomplish. Such behavior is typical in those individuals who later develop paranoia. In paranoia, as we shall see, the strongest fixations are at the anal expulsive level. Other individuals overcome their extreme megalomania but continue pedantic and unable to get away from small details, and these, as we shall see, become compulsion neurotics if they become mentally ill.

4. The Genital Stages

The prevalent form of sexual behavior at the early genital stage is masturbation, exhibitionism, and sexual experimentation of a very

[1] *Cf.* Erikson.

narcissistic sort. The narcissistic form of love affair is one in which the individual is not really interested in loving the other person, but only in being loved by him. As normal continuations of this early phallic stage we may look on masturbation, which we know frequently occurs throughout life in periods when there is no normal sexual outlet. Flirtations of the narcissistic sort are likewise phallic behaviors. The interest in sex, in dirty stories of a sexual sort, in dirty limericks, which occur in all civilizations, may also be thought of as continuations of the phallic stage. As sublimations we have love poetry, dancing, acting, and the type of exhibitionism which we find usually in adolescents of both sexes. Actors are particularly good examples of phallic characters. It is interesting to point out that the actor, particularly the male actor, is practically always sublimating phallic narcissistic fixations. This is borne out in the sexual mores of Hollywood, where marriage, divorce, and remarriage occur so frequently among the movie actors and actresses. We have good reason to believe that the only sexual gratification which many of them ever receive is of the narcissistic sort. As reaction formations against phallic genitality we mention puritanism with regard to sexual matters, extreme sexual modesty, belief in the division into sacred and profane love. At the phallic level it is almost impossible sometimes to distinguish reaction formations from sublimations. At the higher level of genital sexuality, sublimations and reaction formations are more or less identical and we may look on all the great attainments in the arts, in the sciences, and in the field of social leadership as partial renunciations of developed genitality. Such renunciations are, of course, not to be looked on in any way as abnormal, because they are usually at least consciously recognized. But we are getting ahead of the story.

After the period of latency there is a redevelopment of sexuality which in the normal course of events is allowed fulfillment in marriage. Thus as a continuation of this type of sexuality we must mention the normal sex life in which the love of the individual provides satisfaction to both himself and his partner and in which responsibility is felt on both sides. It is scarcely necessary to speak of the sublimation of and reaction formations against this type of sexuality. Psychiatrists know from the study of the range of adult sexual behavior that a great deal of such behavior is inhibited and a great deal of the libidinal energy behind it is rechannelized into the activities of the normal civilized adult human being. Con-

sequently, we are inclined to look on all the so-called "higher endeavors" of humans as sublimations of, or reaction formations against, the normal libidinal drives. There is no particular reason to speak separately of the genital character. The genital character is simply our normal adult civilized person without particular mental conflicts. We should, however, say something about the constellation of character traits which are developed from frustration or fixation in the early genital or phallic period. The outstanding characteristic here developed is that of exhibitionism of a show-off sort. It is typical in the behavior of many of our college students who have not yet completed their psychosexual development. The popular sorority girl who goes to a dance and gets gratifications out of never dancing more than three minutes with any one man and the fraternity man who has kissed all the girls in a certain sorority fall in this category. Individuals who may only be happy in positions where they can show off, individuals who demand adulation without wishing to give anything in return, individuals who "must have a public" are examples of the phallic character type.

The normal adult is thus constantly showing behaviors and character traits which are the residues (albeit in socialized and modified forms) of the infantile sexual stages. The personality structure is laid down in the plastic years of infancy. In overcoming the frustrations of childhood the normal individual continues to show in attenuated form some of his childish psychosexual reaction forms, sublimates others of these, and protects himself against still others by reaction formations. Psychologically the child is thus the father of the man. The normal adult is an individual who has been successful in adapting the succession of his libidinal and aggressive urges to the demands of society. The normal adult, however, still carries these early libidinal and aggressive strivings with him in his unconscious mind and they may at any time become reactivated into consciousness through the events of adulthood. When they do he becomes mentally ill.

The normal individual is characterized first by the fact that the socially completely unacceptable aspects of the infantile sexuality, such as continued oral attachment to the mother or death wishes against the father, are successfully repressed. This means he has developed a strong ego which, by aligning itself with the demands of social and physical reality, is able to control the forces of the id. He has a strong superego and a socially acceptable ego ideal. The

superego, however, is not tyrannical. Certain id satisfactions are allowed by the ego as well as certain ego satisfactions. Through these satisfactions the individual is to a certain extent happy. His

TABLE 3.—THE NORMAL PERSONALITY

	1	2	3	4	5
	Nature of internal conflict.	Social nature of resultant behavior.	Degree of regression.	Relation of basic urges to love object.	Resolution of conflict results in.
Normal	Harmonious balance between ego, superego, id, and outside reality.	Behavior in all spheres constructive and socially acceptable.	None. Genital stage reached.	Postambivalent. Some urges gratified, others sublimated.	No conflict.

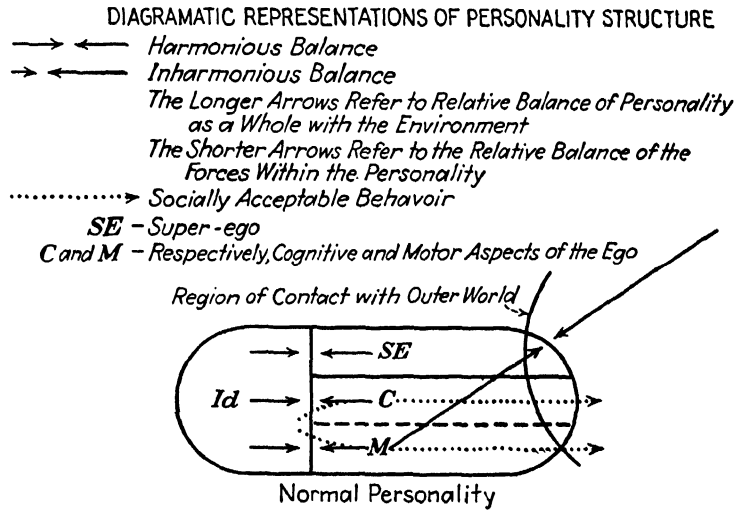


FIG. 8.—Schematic representation of the normal personality.

strongest libidinal attachment is heterosexual at the adult genital level. His homosexuality is sublimated. His aggressions are sublimated or sufficiently held in check. He is engaged in useful productive work and has self-respect and the respect of the community. Now no one ever continues completely happy and completely successful, so normality is simply a goal toward which we must strive.

The concept of the normal is important to us, however, because it is the best basis on which to define abnormal reaction types. In Table 3 and Fig. 8 we have attempted a verbal and a pictorial description of the theoretically normal individual. These should be studied carefully, as they will serve as the basis for our descriptions of the abnormal personality types. The table is probably a more accurate description of the nature of the personality structure than is the diagrammatic representation. For those who think in terms of spatial values, however, the diagrams may be of value. In the diagram the nature of the internal balance of forces is indicated by short arrows, the resultant adjustment of the total personality with the outside environment by long arrows, and the behavior, shown as originating in the id, by broken arrows.[1] The curved line shows the segments of one personality in contact with the outer world or environment (cf. Fig. 7, page 167). Consequently the diagram represents pictorially the chief points made in Table 3.

5. The Theory of Dreams

The psychoanalytic theory also deals with certain phenomena which are normal in that they occur almost daily in all of us but which are abnormal in the sense that they are not the experiences of the integrated active ego in touch with reality. Among such phenomena are dreams. Dreams are hallucinations which we all experience every night; when we awake their hallucinatory nature is quite obvious to us. Freud early became interested in dreams, because people began to tell them to him in psychoanalysis. He soon realized that dreams represented a special type of language which could be interpreted to show the nature of repressed aggressive and erotic urges.

People have been interested in dreams from primitive times. Many of the concepts in all primitive religions can be shown to be based on dreams and dreaming. Before Freud, dreams were considered as experiences either very superior to the conscious waking state, as in the theories which attributed to dreams visitation or prophetic significance, or as very inferior to the conscious waking state, as in most of the earlier psychological and physiological studies.[2] Most such physiological theories considered dreams to be

[1] Since the author has written in the field of topological psychology, he should point out that these diagrams are *not* topological but simply schematic.

[2] We shall have space only for an elucidation of the psychoanalytic theory of

the result of chaotic neural impulses which were accidentally activated during sleeping. Most early psychological theories considered them to be incorrect interpretations of the environmental stimuli. Freud showed that dreams were perfectly natural psychic phenomena which had a definite connection with the phenomena of normal waking life. Freud showed that in dreams the chaotic element activated by neural impulses from preceding real experiences plus the impulses aroused by the environmental stimuli were vehicles by which unconscious desires and wishes fulfilled themselves in a symbolic form. Thus, Freud accepted the findings of previous physiologists and psychologists which based dreams on the residues of experience which were reactivated by environmental stimuli. Before Freud, while it was realized that some dreams were meaningful, most were considered of no significance. Freud, following his general belief that all psychic events are determined, insisted that all dreams had a cause, a significance, and an economy. That the most chaotic dreams have meaning is only clear from a deep analysis of them. Let us start with some dreams where the meaning is clear. We all know that in daydreaming or wakeful fantasy conflict situations on a conscious level are resolved to our own satisfaction. The scorned lover reacts to his frustration in a fantasy in which he returns as a great man and perhaps refuses the acquiescence of the lady under these conditions. The aspiring author reacts to a rejection slip in a fantasy in which he is the editor and the process reversed. The individual without normal sexual outlets reacts with fantasies of a purely erotic nature. The timid soul who is afraid to give way to his aggressions reacts in fantasies in which he is the conquering hero. The mechanism of fantasy or daydreaming is quite clear to all of us. In daydreams we are able to accomplish things which we cannot accomplish in real life. We are able to arrive at our goals and hence get some substitute satisfaction. How this works out has been shown by Lewin and his students in experimental investigations.

If the wish fulfillment character of daydreams is obvious so is that of some night dreams. The titles of popular songs give evidence for this: for instance, "I'll See You in My Dreams," "You Can't Stop Me from Dreaming," "I Wake Up Smiling." The wish fulfillment is obvious in the dreams of hungry people about food, the

dreams. References to the others are included in the bibliographical note to this chapter.

dreams of sexually frustrated adolescents about sexual behavior, the dreams of soldiers in the trenches about home. Sometimes dreams fulfill other immediate physiological needs such as those in which thirst is quenched and in the dreams of urination. Freud was not the first to point out that dreams often represent wish fulfillments. Freud's great contribution was to show that, even where there was no obvious wish fulfillment, the wishes are fulfilled in a disguised form. Even unpleasant dreams fulfill wishes of a sado-masochistic sort. Dreams then reduce internal conflict by symbolic hallucinatory experiences. They have a cause (in the conflict), a significance (in that they represent symbolic resolutions of the conflict), and an economy in that they preserve sleep. Dreams may be classified according to Alexander from the standpoint of the sleep-disturbing stimuli. This is done in Table 4. In this table, categories 1 and 2 are easily interpreted while 3 to 6 require psychoanalysis.

TABLE 4.—ALEXANDER'S CLASSIFICATION OF DREAMS ACCORDING TO SLEEP-DISTURBING STIMULI

Stimuli	Type of dream
1. Physiological urge	Dream of comfort
2. Wishes thwarted by external circumstances	Simple wish fulfillment of infantile type
3. Repressed wishes (internal conflict)	*a.* Distorted wish fulfillment
	b. Denial of latent wish
4. Conflict of conscience	*a.* Self-punishment dream
	b. Punishment eroticized in masochistic or passive homosexual form
5. Dawning insight into motives which patient wishes to reject	Relation of dreams to the analytical process
	Dreams of resistance
	Dreams of false confession
6. Dreams which fail to protect sleep and thus arouse anxiety.	*a.* Insufficient distortion
	b. Insufficient mitigation

Dreams are important in psychoanalysis, not only because of their value in helping the analyst to decipher the unconscious processes but also because they are one of the ways in which the analyst may most clearly bring the patient to the knowledge of his unconscious conflicts. For that reason the psychoanalysts have long been concerned with dreams, and Freud's *Interpretation of Dreams* is the book which Freud himself considered his most important work. We shall have space here only to elucidate the theory of dreams in a very brief form.

Since the wish fulfillment in many dreams is not at all obvious, Freud made a very important distinction with regard to the double content of dreams. The *manifest content* is the content of the dream exactly as it is presented to or remembered by the dreamer. This is the dream with all its bizarre associations, its quick changes, its fantastic sequences. By the *latent content* of the dream is meant the underlying unconscious wish which comes into consciousness through adopting the disguise of the manifest content. In some dreams manifest content and latent content largely coincide, such as in the simple wish-fulfillment dreams we have referred to above of children and of soldiers in trenches and the dreams with nocturnal emissions in adolescent boys. In other dreams the latent content may be discovered only when one knows the life history of the individual and what he has recently been doing in real life and when one has gained the complete free associations of the dreamer about it. Since the dream is a process through which unconscious wishes make entrance into the consciousness in a disguised form, the logic of the dream is very much like the logic of the thought of the child and the thought of the primitive. The mechanisms through which the latent thought becomes manifest are the chief psychic mechanisms of conflict resolution. Thus displacement, symbolization, condensation, reaction formation, introjection, identification, all occur in dreams. *Dream work* is the name given by Freud to the mechanism by which the latent dream thoughts are converted into the manifest content of the dream. Particularly important in the dream work are displacement, condensation, symbolization.

As the unconscious uses certain symbols to indicate certain very primitive and basic conceptions, so there are certain symbols in dreams which have an almost universal meaning. There are considerable theoretical differences as to how this meaning is acquired, and it lies outside the limits set for this book to go into this highly controversial problem. No matter how the symbols get their exact meaning, it is quite clear that certain objects in dreams have in general certain symbolic significance. We append Freud's account of these from his book, *The Interpretation of Dreams.*

The Emperor and the Empress (King and Queen) in most cases really represent the dreamer's parents; the dreamer himself or herself is the prince or princess. But the high authority conceded to the Emperor is also conceded to great men, so that in some dreams, for example, Goethe appears as a father symbol. . . . All elongated objects, sticks, tree trunks, umbrel-

las (on account of the opening, which might be likened to an erection), all sharp and elongated weapons, knives, daggers, and pikes represent the male member. A frequent, but not very intelligible symbol for the same is a nail file (a reference to rubbing and scraping?). . . . Small boxes, chests, cupboards, and ovens correspond to the female organ; also cavities, ships, and all kinds of vessels. . . . A room in a dream generally represents a woman; the description of its various entrances and exits is scarcely calculated to make us doubt this interpretation. The interest as to whether the room is "open" or "locked" will be readily understood in this connection. There is no need to be explicit as to the sort of key that will unlock the room; the symbolism of "lock and key" has been gracefully if broadly employed by Uhland in his song of the *Graf Eberstein*. . . . The dream of walking through a suite of rooms signifies a brothel or a harem. But, as H. Sachs has shown by an admirable example, it is also employed to represent marriage (contrast). An interesting relation to the sexual investigations of childhood emerges when the dreamer dreams of two rooms which were previously one, or finds that a familiar room in a house of which he dreams has been divided into two, or the reverse. In childhood the female genitals and anus (the "behind") are conceived of as a single opening according to the infantile cloaca theory, and only later is it discovered that this region of the body contains two separate cavities and openings. Steep inclines, ladders, and stairs, and going up or down them, are symbolic representations of the sexual act. Smooth walls over which one climbs, façades of houses, across which one lets oneself down—often with a sense of great anxiety—correspond to erect human bodies and probably repeat in our dreams childish memories of climbing up parents or nurses. "Smooth" walls are men; in anxiety dreams one often holds firmly to "projections" on houses. Tables, whether bare or covered, and boards, are women, perhaps by virtue of contrast, since they have no protruding contours. "Wood," generally speaking, seems, in accordance with its linguistic relations, to represent feminine matter (*Materie*). The name of the island Madeira means "wood" in Portuguese. Since "bed and board" (*mensa et thorus*) constitute marriage, in dreams the latter is often substituted for the former, and as far as practicable the sexual representation complex is transposed to the eating complex. . . . Of articles of dress, a woman's hat may very often be interpreted with certainty as the male genitals. In the dreams of men one often finds the necktie as a symbol for the penis; this is not only because neckties hang down in front of the body and are characteristic of men, but also because one can select them at pleasure, a freedom which nature prohibits as regards the original of the symbol. Persons who make use of this symbol in dreams are very extravagant in the matter of ties and possess whole collections of them. All complicated machines and appliances are very probably the genitals—as a rule the male genitals—in the description of which the sym-

bolism of dreams is as indefatigable as human wit. It is quite unmistakable that all weapons and tools are used as symbols for the male organ: *e.g.*, ploughshare, hammer, gun, revolver, dagger, sword, etc. Again, many of the landscapes seen in dreams, especially those that contain bridges or wooded mountains, may be readily recognized as descriptions of the genitals. Marcinowski collected a series of examples in which the dreamer explained his dream by means of drawings, in order to represent the landscapes and places appearing in it. These drawings clearly showed the distinction between the manifest and the latent meaning of the dream. Whereas, naïvely regarded, they seemed to represent plans, maps, and so forth, closer investigation showed that they were representations of the human body, of the genitals, etc., and only after conceiving them thus could the dream be understood. Finally, where one finds incomprehensible neologisms one may suspect combinations of components having a sexual significance. . . . Children, too, often signify the genital organs as "little man," "little woman," "little thing." The "little brother" was correctly recognized by Stekel as the penis. To play with or to beat a little child is often the dream's representation of masturbation. The dream work represents castration by baldness, haircutting, the loss of teeth, and beheading. As an insurance against castration, the dream uses one of the common symbols of the penis in double or multiple form; and the appearance in a dream of a lizard—an animal whose tail, if pulled off, is regenerated by a new growth—has the same meaning. Most of those animals which are utilized as genital symbols in mythology and folklore play this part also in dreams: the fish, the snail, the cat, the mouse (on account of the hairiness of the genitals), but above all the snake, which is the most important symbol of the male member. Small animals and vermin are substitutes for little children, *e.g.*, undesired sisters and brothers. To be infected with vermin is often the equivalent for pregnancy. . . . As a very recent symbol of the male organ I may mention the airship, whose employment is justified by its relation to flying and also, occasionally, by its form. . . . Stekel has given a number of other symbols, not yet sufficiently verified, which he has illustrated by examples. The works of this author, and especially his book, *Die Sprache des Traumes*, contain the richest collection of interpretations of symbols, some of which were ingeniously guessed and were proved to be correct upon investigation, for example, in the section on the symbolism of death. The author's lack of critical reflection, and his tendency to generalize at all costs, make his interpretations doubtful or inapplicable, so that in making use of his works caution is urgently advised. I shall therefore restrict myself to mentioning a few examples.

Right and *left*, according to Stekel, are to be understood in dreams in an ethical sense. "The right-hand path always signifies the way to righteousness, the left-hand path to crime. Thus the left may signify homo-

sexuality, incest, and perversion, while the right signifies marriage, relationships with a prostitute, etc. The meaning is always determined by the individual moral standpoint of the dreamer" (*op. cit.*, p. 466). *Relatives* in dreams generally stand for the genitals (p. 473). Here I can confirm this meaning only for the son, the daughter, and the younger sister—that is, wherever "little thing" could be employed. On the other hand, verified examples allow us to recognize *sisters* as symbols of the breasts and *brothers* as symbols of the larger hemispheres. To be unable to overtake a carriage is interpreted by Stekel as regret at being unable to catch up with a difference in age (p. 479). The *luggage* of a traveler is the burden of sin by which one is oppressed (*ibid.*). But a traveler's luggage often proves to be unmistakable symbol of one's own genitals. To numbers, which frequently occur in dreams, Stekel has assigned a fixed symbolic meaning, but these interpretations seem neither sufficiently verified nor of universal validity, although in individual cases they can usually be recognized as plausible. We have, at all events, abundant confirmation that the figure three is a symbol of the male genitals. One of Stekel's generalizations refers to the double meaning of the genital symbols. "Where is there a symbol," he asks, "which (if in any way permitted by the imagination) may not be used simultaneously in the masculine and the feminine sense?" To be sure, the clause in parenthesis retracts much of the absolute character of this assertion, for this double meaning is not always permitted by the imagination. Still, I think it is not superfluous to state that in my experience this general statement of Stekel's requires elaboration. Besides those symbols which are just as frequently employed for the male as for the female genitals, there are others which preponderantly, or almost exclusively, designate one of the sexes, and there are yet others which, so far as we know, have only the male or only the female signification. To use long, stiff objects and weapons as symbols of the female genitals or hollow objects (chests, boxes, etc.) as symbols of the male genitals is certainly not permitted by the imagination.

It is true that the tendency of dreams, and of the unconscious fantasy, to employ the sexual symbols bisexually reveals an archaic trait, for in childhood the difference in the genitals is unknown, and the same genitals are attributed to both sexes. One may also be misled as regards the significance of a bisexual symbol if one forgets the fact that in some dreams a general reversal of sexes takes place, so that the male organ is represented by the female, and *vice versa*. Such dreams express, for example, the wish of a woman to be a man.

The genitals may even be represented in dreams by other parts of the body: the male member by the hand or the foot, the female genital orifice by the mouth, the ear, or even the eye. The secretions of the human body—mucus, tears, urine, semen, etc—may be used in dreams interchangeably. [From Sigmund Freud, *The Interpretation of Dreams* in *The*

Basic Writings of Sigmund Freud, The Modern Library, New York, 1938, pp. 371–375. To enable the reader better to follow the text, Freud's footnotes have been omitted.]

The interpretation of dreams, however, is only possible by a psychoanalyst who knows a great deal about the personality of the individual in question and his free associations to the thoughts in the dream. The reader must not get the idea that by memorizing lists of symbols he can interpret his own or anyone else's dreams. Dream analysis in the psychoanalytic sense is a highly complex technique with which we shall deal briefly in Part IV.

A few brief dreams will serve for illustrative purposes. The author will first give one of his own in which the interpretation is carried out only to the foreconscious level. The dream occurred when he was a first-year graduate student at the University of Berlin. He dreamed that he was sitting in the psychological colloquium with the various professors of the institute and advanced German students and was having some difficulty, owing to his scant knowledge of the German language, in keeping up with the topic being discussed. All of a sudden Professor Koehler, the Director of the Institute, made a rather magical motion and all the other students and professors were turned into apes. Professor Koehler then said, "Since these apes understand neither German nor English, you and I may continue the discussion in English." This pleased him immensely, and he held a very brilliant conversation on the topic at hand with Professor Koehler. The apes continued to jabber among themselves. At the end of the session the door of the room opened and the janitor of the Psychological Institute came in, bringing a large tray of beer and followed by two well-dressed, pretty young American girls, who said, "Let's all go dancing."

This is a typical dream in its surface irrationality, its confusion, its complete breakage with normal perceptual reality. One might think that it was simply an absurd rehash of recent events. A brief description of the writer's personal social status at the time, however, brings quite a decided meaning into this. The manifest content of a dream is quite often dictated by recent events, waking thoughts, the things with which the dreamer's mind had been occupied. These are already, so to speak, close to the level of consciousness, and the dream work consists in using them as vehicles for the escape of the unconscious latent content. The writer had a rather good academic record in a large American university and had won a

fellowship to study in a German university. In the American classroom he had been able to discuss topics fluently and to call sufficient attention to himself. At the time of the dream his German was very inadequate. He was particularly anxious to make a good impression on Professor Koehler, for whom he had the greatest professional admiration. He feared, however, that his impression was poor. In the seminars, by the time he was ready to express himself in grammatical German, the topic under consideration had often changed. The seminar in question was concerned with Professor Koehler's justly famous work on the intelligence of anthropoid apes. The writer had often thought semiconsciously, "If I could only speak German properly, I could certainly outshine all these 'dumb apes.'" In the dream the outshining occurred. By symbolic transformation the "apes" of students became real apes. Consequently the conversation could be held in English. Not only was he then able to realize his ambition of having the professor think highly of him, but he realized it to an extent that he would not have consciously admitted. He became in the dream not only the equal of the German students but one belonging to a higher species. Furthermore, he was inclined to find German social life rather tawdry. He had read many novels and popular descriptions of the gaiety of the German university life and had come there expecting to partake in some of this. Consequently, in the dream not only does he arrive at social equality with the professor, but he does so in a situation which fulfills his semiconscious longing for an elegant life. This is shown in the last of the dream. The janitor, who in real life was a good-natured, commonplace fat and middle-aged German petty official, becomes dressed as a stylish flunky and appears with beer, followed by two comely American girls who invite the two professional colleagues out for an evening of gaiety.

The following is a dream of a young woman student in an eastern coeducational university. She dreamed, "I was in New York with Bill, the young man to whom I am almost engaged. It was a cloudy day and he was carrying an umbrella. We went for a ride on a Fifth Avenue bus. When Bill suddenly said 'I am hungry' we got off the bus and went into a restaurant, where we both ate a large and satisfactory meal. Bill suddenly got up and said, 'I will leave you my umbrella, and you may pay the check.' He ran out through the restaurant door and I woke up in a panic because I had no money."

From the analysis of the life situations and the free associations, it turned out that the young lady in question was having an emotional conflict regarding the young man during this period. He was begging her to become his mistress with the hope that later on they might be married. Her whole upbringing and her ambition to be a respectable married woman would not enable her to give way to the sexual desires his advances aroused in her. They had spent a great deal of time riding on Fifth Avenue busses. The young man suggested that they go to the apartment of a friend of his and prepare a dinner and spend the evening there. The young woman refused to do this, because she realized that under such circumstances she would have a considerable conflict between her social ideals and her erotic wishes. It was at about this time that the dream occurred. From the analysis, the dream is quite clearly a wish fulfillment, where sexual intercourse occurs. The significance of the big meal together is that of sexual intercourse. The poetical relationship of sex and eating is well known. One speaks of a "love feast," etc. The going to the friend's apartment would have been a feast of food and might have turned into a feast of love. In the dream Bill leaves the young lady his umbrella. The umbrella is here a penis symbol. Bill runs away from the place where they are enjoying this illicit feast. She is panic-stricken because she cannot pay the bill; that is, she cannot make the social sacrifice which illegal amour demands. In her associations the old saying has occurred to her that "it is always the woman who pays." This also occurs, of course, in the dream. The meaning of the dream was not at all obvious to the young lady at first, but on the basis of her free association, she soon realized its significance and soon told of her whole immediate conflict.

The above dreams were dreams concerned largely with material close at least to consciousness and concerned with conflicts at a more adult level. Let us consider one or two of a more primitive or infantile level. Children also have dreams.

The following is a brief dream of a little girl six years old. "She was sitting on the toilet in the guest bathroom while her father was occupying the toilet in the parents' bathroom, and the mother, having no place to go to the toilet, wet the bed." Actually, the child herself wet the bed at the time of the dream. The identification in this dream of the child with her mother is quite obvious in terms of psychoanalytic theory. She appears in the dream as the

mother in that she was at an equal position with the father; both child and father were using the toilet. The mother was thus made to wait on her. The mother was under her in the social heirarchy. It was the mother who had to have the embarrassing experience of wetting the bed. But actually, as the child wet the bed, she did this in her role as the mother. In the dream consequently the child is gaining a symbolic satisfaction through resolution of the Oedipus situation by herself displacing the embarrassing role of becoming wet onto the mother in the dream. In other words, she is herself and the mother at one and the same time. Those adults who find it difficult to accept such interpretations usually forget that a child's mentality is quite different from that of the adult. In the child until the eighth or ninth year there is very little difference between real perceptions and fantasies. Children have reputations as being colossal liars, but they are not liars at all in the adult sense of the word. They simply fail to differentiate their fantasies from their real perceptions. Consequently a child in daydreams or real dreams can easily perceive herself as being what she wants to be.

An attractive young Englishwoman, who was sexually frigid and who had certain symptoms of a hysterical nature, reported the following dream. "I dreamed that I was in the living room of my house. On the floor of this living room is an expensive oriental rug of very fine texture. In the room is also a very handsome fireplace. I was shocked by the fact that there was fire large enough to fill the fireplace burning on the oriental rug, and that the fireplace had never had a fire in it. I resolved that the fire must be shifted from the rug to the fireplace."

This young woman was sexually frigid and was suffering from conversion of libidinal urges into a rather disfiguring skin rash. The average reader will see at once something of the significance of this dream: the fireplace represents the woman's own genitalia, because house nearly always represents a body. Her frigidity is indicated by the fact that the fireplace has no fire in it. Fire is of sexual significance in dreams as it often is in everyday language and behavior. One speaks of "burning passion" or more vulgarly one speaks of getting "hot" to refer to sexual excitement. One says that so-and-so is full of "fire." In pyromania, as we shall see in Part IV, lighting a fire is an unconscious equivalent of sexual behavior. This woman had become aware that her skin rash was connected with sexual urges through the process of conversion. The dream

meant that the passion which should be connected with her genitalia was out of place and burning a hole in the fine oriental rug, which represented her skin. In the dream she felt the desire to put the fire in the fireplace, that is, to return her libidinal strivings to the biologically proper place.

Thus, psychoanalytic theory accounts for dreams and gives us a method of finding out how dreams are related to the deep unconscious urges. In the dream these urges gain surrogate satisfaction by appearing in consciousness in a disguised form. The disguise prevents the dream from arousing undue anxiety in the dreamer's mind and thus protects his sleep. Sometimes, of course, dreams do awaken us because the conflict is too strong. It is interesting that most of us dream every night. Most of the material of these dreams is readily forgotten because after sleep has built up the spent energies the ego again must face reality and so represses the dream content.

6. Psychopathology of Everyday Life

All of us make mistakes. Some mistakes undoubtedly occur through ignorance or through accidents, but for many mistakes we "know better" and soon correct them. How do we come to make these mistakes in the first place?

Before Freud's work, lapses and slips, the everyday mistakes which all of us make were all considered to be accidental. In this category were slips of the pen, slips of the tongue, minor memory lapses, the misplacing of objects, and minor accidents. By "accidental," throughout the field of psychology, we generally mean the category into which we place all behavior for which we have no causal dynamic explanation. Freud's most important methodological contribution, next to his work on dreams, was made in his book *The Psychopathology of Everyday Life* (1914). In this book Freud points out again that no piece of psychological behavior is without a cause, meaning, and economy. He points out that these little mistakes of everyday life represent, like dreams, mechanisms through which the unconscious aspects of our aggressive and erotic urges receive at least partial satisfaction through interfering with our normal habitual acts. The mistakes of everyday life occur in the waking state and represent methods through which ideas from the preconscious or shallow unconscious make themselves conscious in a diguised form. Freud points out that the forgetting with subsequent recall of personal names and of foreign words, slips of the

tongue, slips of the pen, the forgetting of resolutions, the misplacing of objects, and the so-called "purposeful accidents" have real significance.

We have space only for a few examples of these. In the first place, Freud showed that we often repress names and dates because we wish unconsciously or preconsciously that they were different. A most frequent example of this according to Freud is calling an old sweetheart by her maiden name, *i.e.*, calling her Miss Jones rather than Mrs. Smith, when we know quite well that her name is Mrs. Smith. Similar in origin is the doubt about names. "Why can't I remember so-and-so's married name?" may indicate the wish that so-and-so had remained unmarried and was still a possible sexual choice and for this reason the repression occurs. We also forget the names of people toward whom we are particularly aggressive, although we may have repressed this aggression. Not knowing the name of a person whom we have met is like saying, "You are so unimportant that I do not remember who you are at all." One may suspect that people who have great difficulty with names in the social situation are victims of this type of repression and really quite aggressive. Recently the author could not recall the name of a colleague called Smith! Honest examination of his feelings toward Smith showed him to be very hostile toward his colleague. A friend recently referred to the victim in a much discussed murder case as, let us say, Whittleby. Witherson was the correct name and Whittleby is the name of an acquaintance of whom the friend was not too proud. The young married woman also often falls back early in her married career to the use of her maiden name. That this is not simply due to habituation is shown by the fact that this seldom occurs in the very earliest period of married life, but rather when the first glamour has worn off after the honeymoon period is over. It is quite understandable that young ladies who have been debutantes might wish to be so again and consequently fail to refer to themselves by their true social or married names.

Slips of the tongue and slips of the pen also belong to the psychopathology of everyday life. These, like dreams, had been discussed by physiologists before Freud. Here again these explanations failed to give any meaning to the behaviors. Recently a friend of the author's who has a high opinion of himself arose in a scientific meeting to offer comment on the paper of a colleague for whom he had not too great respect. He said, "May I offer a few brilliant

remarks on this very modest paper?" What social usage demanded that he say and also what he had planned to say was, "May I offer a few modest remarks on this very brilliant paper?" This was a case in which the thought became the true father of the spoken word. Another friend who pretends to be politically very liberal said, "The defeat of Roosevelt is somewhat overshadowed by the threatened fall of Moscow." What he consciously thought he had been saying was, "The defeat of Landon is somewhat overshadowed by the threat of the fall of Madrid." One of the author's professors, a very competent minerologist, who was aware of his competence, in addressing his class one day said, "Three of the most prominent geologists of America were seated together, and I—*I* mean *one*—said to the other two." Another colleague referred to one of his own works as the "best I ever read" and blushingly added "I mean 'wrote,' of course." Social usage demands in such a situation a certain modesty, but our instinctual life demands self-gratification. Freud reports another professor who said, "One can name the individuals who know something about this field on one finger." Now all his students realized this man to be a true expert in the field and to admit to four colleagues who had an equal understanding of this subject matter was more than he could allow himself instinctually. Slips of the pen occur in a like fashion. The author recently wrote about a book which he had published, "I am getting very favorable response to the book in the East, but one is never a *profit* in his own country." The thought which he could not quite admit to himself was that it would be very nice if the book had something of a popular sale in the place where he lived. A friend who wished to go to England but who had to visit in Chicago wrote and said, "I am so glad that I am coming to see you soon," and addressed the envelope to Chicago, England. Dr. Karl Menninger reports that he was rather rebuffed by a man whom he visited in a professional capacity and who paid him only very perfunctory attention both in the professional and social sense during this visit. On checking his letter of thanks to the individual before sending it, he noticed that he had written, "I wish to thank you for any courtesies which you extended me," when he had consciously planned to say, "for the many courtesies." Such slips of the tongue and slips of the pen as we have mentioned belong to the psychopathology of everyday life. We all make them daily. Patients who are really mentally sick make them perhaps much more frequently than those

of us who consider ourselves normal, and their interpretation with these individuals has proved to be of greatest importance in psychoanalysis.

The writer recently examined a woman who claimed to be mourning the death of a sister and who claimed to be worried about the health of her daughter. This worry, he had cause to believe from the case history, was a reaction formation to her aggressivity toward her daughter. In relating her history she said, "and in November of last year my daughter died—I mean, of course, my sister." This same woman claimed to be very religious and to have always been influenced by her clergyman. The latest clergyman, she claimed, was the best of the lot, and the one whom he had succeeded, somewhat inferior. She said, "The Reverend ————, who was a good and honest man, was succeeded by the Reverend ————, whom I am not sure was either." Then she said, "In what order did I give you those names?" On being told, she said, "I meant, of course, the reverse." Not only do aggressive urges thus escape the repressive forces of the personality through the mistakes of everyday life, but the erotic urges do so as well. "I should like very much to *make* her personally," says a friend about a young lady to whom he wishes an introduction.

Misplacing is also often a part of psychopathology of everyday life. One will leave an umbrella or a book or a hat, quite unconsciously at the time, but be quite pleased when he has an excuse to return to the house where it was left. A professor of English in an eastern university reports that his lectures seemed to be going poorly at a certain period of time. The jokes seemed stale and the students were getting restless after about twenty minutes when he previously had been able to hold their attention through the whole lecture period. This had got to the place where he was really embarrassed to appear before them, and, having some business to do at a downtown bank, he took his lecture notes in a brief case with him. He left town at eleven o'clock and, on arriving at the university lecture hall, found he did not have his notes. He immediately took a cab back to the bank, returned to the lecture hall, paid the cab—and then discovered that he had left the notes in the taxi. He apologized and did not have to face his class until the next session. Every psychoanalyst has the constant experience that patients leave articles in his consultation room and have to return to get them.

Many accidents occur for the same reasons. "Accidentally on purpose" is a popular phrase indicating that the psychopathology of everyday life is known even by the man on the street. How frequently the young housewife is only superficially upset when she breaks the hors d'oevres dish from Aunt Minnie. How frequently one says, "Too bad; I'll have to get a new suit," when a cigarette hole appears in one which the individual had not quite made up his mind to discard.

Not only accidents to property but also accidents to one's own person are very frequently due to unconscious aggressions. This is a new subject of investigation by psychoanalysts, and Dr. Karl Menninger has written the most systematic book on it. In this book, *Man against Himself* (1938), Menninger is able to show that suicide usually has behind it deep-lying unconscious motivation and that the surface reasons which potential suicides give for their actions are by no means sufficient to account for the act. He points out that suicide results when the aggressive urges are inwardly directed in all their components; in other words, when the wish to kill is directed on the individual, the wish to be killed is strong in him, and the wish to die is also present. In these cases suicide occurs whether or not these wishes are consciously felt at all. We would all be suicides were it not for the ambivalence of the basic life urges, and what keeps most of us living through the normal span of years is the fact that the basic aggressivity which may be turned inward is neutralized by a certain amount of the erotic urges. Between suicide of an outright sort in which the individual really kills himself and mental health there are all sorts of intermediary forms. Consequently, Menninger is able to show that such behaviors as asceticism and martyrdom, neurotic invalidism, alcoholic addiction, antisocial behavior, and psychosis are all forms of chronic suicide; in other words, forms where the individual kills himself slowly over a long period of time. Here there is enough erotic energy to prevent outright suicide. Certain of these problems will be treated in Part IV.

Bibliographical Note

The psychoanalytic literature abounds in descriptions of the "normal" behaviors in relationship to infantile sexuality. Besides the classic descriptions of Freud, Abraham, Ferenczi, and Jones (*cf.* Chap. X), Flügel stresses the relationship of psychoanalysis to the normal family life. Important works on child psychology which apply to this chapter are those of Klein and Anna Freud

(1928, 1937). Also interesting in this connection is Groddeck. The specific literature on the oral, anal, and genital characters will be reviewed in Chap. XX.

Freud gives the classical theory of dreams. The introductory section reviews other dream theories before his. Stekel's (1922) dream studies are important. *The Psychopathology of Everyday Life* (1914) and *Wit and Its Relation to the Unconscious* (1916) are Freud's other important works on "normal" psychology.

CHAPTER XII

PSYCHOANALYSIS: SUMMARY, CRITICISM

1. Summary of the Psychoanalytic Theory

In the last three chapters, we have developed the psychoanalytic theory in its systematic aspects. In the next section of this chapter, we shall have something critical to say about it. Much may be said quite justifiably about the form in which the theory has been expressed; undoubtedly even some of the content of the theory stands in need of revision. But the fact remains that through the work of Freud and his chief followers, we have the only systematized theory of psychology which accounts for both the normal and the deviate forms of total human behavior. Academic psychologists on the whole have dealt with problems which are, to be sure, psychological problems but still only part problems of the integrated behavior of organisms. No matter how important for both physiology and neurophysiology the work in perception has been, or no matter how important for both pedagogy and theoretical biology the work on learning has been, the fields which have been most thoroughly investigated by the academic psychologists have little to do with the deep problem of personality structure and genesis. Recently, it is true, some of the experimental psychologists, most notably Lewin and his colleagues, have begun to concern themselves in this field, and their work, together with that of other academic psychologists which has implications for psychopathology, will be discussed in the final chapter of this book.

Psychoanalysis is a method of observation, a psychotherapy, and a system of psychology. We have so far presented in detail only its systematic aspects. This system may be divided into several parts and for review we can do no better than take up these parts separately and show how they are related. The *theory of the basic urges* is that part of the Freudian theory which deals with the dynamics underlying all human behavior. The basic urges of a constructive sort (the erotic impulses, the tender impulses, the building-up impulses) and the basic urges of a destructive sort (aggressive

impulses, hostile impulses, tearing-down impulses) are to be considered biologically determined and innate. They are present in man from birth and are probably never clearly differentiated. As long as there is enough constructive force to neutralize sufficiently the aggressive force, man goes on more or less well adjusted to his life situation. When the aggressive urges outweigh the erotic urges, sickness and maladjustment ensue. How this may occur is shown in the theory of *conflict*. According to the theory of conflict, from birth until death these basic urges must meet with blockage and frustration imposed partly by the real physical forces of nature, but even more drastically by the social structure. In order to preserve society, man must learn to curb both his erotic and his aggressive urges. In a dialectical fashion, this brings about changes in the structure of the personality, which is thus to be considered as conditioned by the way in which the organism meets frustration. If the basic urges are the *sources* of energy for human behavior, the form of this behavior is constantly modified by the conflict. Freud has some definite ideas as to what happens in a conflict situation, that is, some ideas about the possible ways in which conflict may be resolved. The behavior of resolution will have some significance with regard to the life history of the individual and the method of resolution will be economical when we consider the individual as a psychobiological unit.

A third great part of the psychoanalytical theory is concerned with the *structure of the normal adult personality*. It supposes that the normal adult individual furnishes what Freud has called dynamic problems, topical problems, and economic problems. Normal adult life is made up of the control of the basic dynamic urges by the dynamic aspects of the personality: the ego, the superego, and the id. These dynamic forces come to final economical reequilibration by working out conflicts in the various topographical parts of the self: the unconscious, the foreconscious, and the conscious. The next important subdivision of the Freudian theory is the *theory of psychosexual genesis*. It is concerned with the normal sequence of events through which, from the undifferentiated primitive organism of the infant, the normal adult emerges. It is also concerned with the possible development of abnormal personality traits. In general, this process of growth is a dialectical one, in which the frustration of some form of behavior leads to growth and differentiation of the personality, so that succeeding frustrations are on a higher level.

Thus, the frustration of passive oral behavior in weaning leads to the development of aggressive oral behavior. In turn, the two stages of anal behavior are developed. The frustration of anal sexuality leads to the development of phallic genitality, the frustration of phallic genitality leads to the latency period, which is overcome by the reactivation of sexuality at puberty. The theory of psychosexual genesis leads directly to the understanding of normal modes of

TABLE 5.—SHOWING HOW VARIOUS BEHAVIORAL CATEGORIES ARE EXPLAINED BY THE VARIOUS PSYCHOLOGICAL VIEWPOINTS

	Psychosis	Neurosis	Perversion	Disordered character	Genius
Theological and unenlightened lay views	Punishment by God for sinning	Nervousness	Sinners	Sinners and ornery	Inspired by God
Lay-viewpoint	Result of bad heredity and severe emotional strain	Nervousness	Sinners	Sinners and ornery	Poetic inspiration
Orthodox psychiatric viewpoint	Constitutional inferiority plus behavioral strain	Constitutional inferiority and nervous strain	Heredity or bad conditioning or not a problem	Heredity or bad conditioning or not a problem	Not a problem
Psychoanalytic viewpoint	All are explained as various ways in which internal conflict achieves economic resolution through personality restructurization. *Cf.* Table 3, page 220, and the tables in Part IV.				

behavior and personality traits on the one hand and the theories of psychoanalytical psychiatry on the other. We have so far considered the normal personality and psychopathologies of everyday life and dreams. In Part IV, the theories of psychoanalytic psychiatry will be presented.

In general, with a good constitution and/or not too adverse environmental conditions, the result of psychosexual genesis is the development of a normal adult personality, a moderately happy individual who lives the average span of years. Given a less favorable constitution and/or a more unfavorable environment, we may have the development of a mentally ill individual, a sexual pervert, a disordered character, or a genius. Psychoanalysis thus presents a theory which deals with nearly all psychological problems of a vital

sort. Only when we think of the popular and even of the older scientific psychiatric theories of all these behavior forms can we realize what great advances the psychoanalytic theory has made. In Table 5 we give briefly the explanations assigned to these various behavior forms from the layman's view and in the older types of psychiatry.

From this table, we see how the mystical, prescientific ideas of personality structure are changed into the integrated, systematic presentation of Freud. The exact mechanisms through which these various types of mental abnormality develop may only be given in the following chapters. Although the framework for a completely integrated and systematized theory of normal and abnormal behavior has been laid down by the works of Freud, many details remain to be clarified. We have, however, the basis for building a systematized science.

2. Criticism of Psychoanalysis

Psychoanalysis has been criticized on the most varied grounds. Much of this criticism has been that of morally incensed individuals, who, without understanding anything of what Freud means by sex, have attempted to show that psychoanalysis is "immoral," "wicked," "nasty." From our foregoing presentation, it should be quite obvious that the theory is none of these things. Consequently, we shall not deal with this type of criticism.

Another form of criticism, with which we shall also not deal in detail, comes from a basic misunderstanding of the role of biological factors in psychoanalysis. It is claimed that psychoanalysis has no place for physical, hereditary, or constitutional factors. Such a misunderstanding could only arise in the minds of individuals who have never read Freud. The theory is actually a *psychobiological* one and Freud stresses this in all his works. Other critics have censored Freud for not allowing sociological or cultural factors any role in his theory of personality determination. Since, however, the superego is almost completely sociologically determined, this type of criticism is also not to be taken seriously. The theory is thus actually a *socio*-psycho-biological one. Besides these popular misconceptions, many of the criticisms by academic psychologists and orthodox psychiatrists have been based on either an incomplete or a distorted understanding of some of the basic postulates. Psychoanalysis, like all healthy theories, has undergone continued change and modification

in the last fifty years. It should be obvious that even today in some of its aspects it is more complete than in other aspects, that many loopholes remain, that many problems are only partially understood. We must say of the Freudian theory that even if it does not have all the answers, it does pose all the questions. Posing the questions in a scientific fashion represents a colossal advance over what nineteenth-century psychology and psychiatry were able to do.

We believe that the Freudian mechanisms function in contemporary society and in very much the way that Freud claims they do. Anyone who has had any extended experience with psychotic and psychoneurotic patients, anyone who has really talked with homosexuals, anyone who has known the criminal and other perverse character types after having obtained a good theoretical background in psychoanalysis will be convinced of the basic correctness of the content of Freudian theory. Some aspects are more easily understood and seen as correct than others. Perhaps to the average individual the psychology of the anal period is the hardest to understand. The normal, healthy individual, on first hearing about it, is inclined to say, "This is preposterous stuff and nonsense." Of course, psychoanalysts have pointed out why the normal individual finds this preposterous. The normal individual has in early childhood repressed his interest in anal sexuality. But anyone who has had close contact with an individual suffering from compulsion neurosis or one who is paranoiac or homosexual cannot fail to see the Freudian theory verified time and time again almost to its minutest details in the behavior of the individual concerned. The mechanisms which Freud has uncovered undoubtedly occur not only in the mental patient, but in all of us.

If, then, we are in general agreement that the facts accounted for by the Freudian theory are in order, we must turn to the formal aspects of the Freudian theory and its underlying basic postulates. Many modern scientists who accept the facts and their interrelationships as uncovered by Freud are very critical of Freud as a methodologist. (The whole Freudian theory is based on the theory of basic urges, and these urges are almost equivalent to the instincts of the nineteenth century biologist.) Freud, himself a medical man, naturally accepted the prevalent view of the nineteenth century that there were biologically founded innate reaction tendencies or instincts. Of course, he advanced considerably beyond usually accepted instinct theory. At the time of Freud's earliest papers everyone accepted

without any question the existence of instincts for self- and race-preservation. Freud's own writings, perhaps more than those of any other modern scientist, have given us reasons for doubting the nineteenth century theory of human instincts. Freud early showed that besides the components of the libido which lead to heterosexual fixations, all of us have libidinal components which are homosexually directed. In cases of explicit homosexuality we find an individual whose sex behavior completely invalidates the idea of an instinct for race preservation. Consequently, with regard to this aspect of nineteenth century biological theory, we may say, following Freud's theory, that individuals are instinctively race-preservative or instinctively race-destructive. Before Freud's time the biologist, insofar as he was concerned with homosexual behavior at all, was inclined to consider it as a morally reprehensible perversion and an abnormality quite beyond the normal laws of development. Consequently, it was a great methological advance when Freud insisted that the aberrant forms of sexual behavior must be covered by the same basic principles which cover the normal forms. In so doing, he was himself beginning to dig the grave of biological-instinct theory. With the instinct for self-preservation, Freud and his followers early discovered the self-destructive and the aggressive aspects of behavior, which even the most normal of us exhibit at some time or other. Consequently, again we can only say that man is either self-preservative or self-destructive. The now widely acknowledged fact that there is no human behavior trait which is solely biologically or hereditarily conditioned has led most modern biologists to give up instinct completely as an explanatory mechanism. Today we still use the term "instinct" to describe certain primarily biologically conditioned, innate, and teleological behavior patterns. But we do this with the realization that whatever behavior actually occurs is a function of the biological organism in an environment whose social, psychological, and political characteristics must also be taken into consideration.

The psychoanalytic theory of basic urges has never been thought through to its complete logical consequences by Freud or most of his followers. If we are to say that behavior is either self-preservative or self-destructive, or race-preservative or race-destructive, we might as well say that there are no basic instincts which lead to definite behaviors quite independent of the existing environment. Freud, in accepting the best biological theory of his time, continued to build

on this and modified it without definitely submitting it to a thorough methodological reconsideration. When we do this, we find that the theory of basic urges must be modified. Today most academic psychologists and even many of the psychoanalysts are inclined to accept the facts of erotic and aggressive behavior but to attribute these behaviors to the total socio-psycho-biological field. This is a matter of more than academic interest and has definite implications for psychotherapy, sociological theory, and social philosophy. To take only one example: If the theory of destructive instincts is correct in that one of the components of aggressivity is the wish to kill, the control of this instinct both in the individual and in society would be almost impossible. Some psychoanalysts have contended, basing their arguments on the instinct theory, that war is inevitable and socialism impossible. If on the other hand the wish to kill, which we must honestly admit as a real psychological fact, develops in the social field through frustration of constructive impulses, then change in the educational and social system might divert aggressivity into socially more acceptable forms. Actually, it is implicit in the hope of psychoanalysis that through individual therapy this can be done. Actually, the methodological shortcomings of the theory of basic urges are by no means insurmountable, and there is no reason why the acceptance of a field-theoretical interpretation of the behavior covered by the concept of instincts in any way invalidates the correctness of the intercorrelations of behavior which the psychoanalysts have observed.

Methodologically, it is also difficult to accept the theory of the double tripartite division in the structure of the normal adult personality. From all the more recent studies in genetic psychology, it is quite obvious that the process of growth does consist in the differentiation of more complex wholes out of more primitive units. The concept of the unconscious as opposed to that of the conscious results necessarily from what we know about not only psychopathology but normal psychology as well. But the idea of the strict division into conscious, foreconscious, and unconscious as definitely bounded topographical regions can only be looked on as a crude first approximation of reality. Although it is undoubtedly true that there is an underlying difference between the structure of immediate sensory perception and the structure of deeply repressed emotional experience, it is probably quite unlikely in reality that three definite regions of consciousness and only three are to be distinguished. So

we see that, while theoretical constructions of some sort are necessary to account for psychopathological facts with regard to level of consciousness, those of Freud are only crude first approximations. Similarly, with the concepts ego, superego, and id. We have already pointed out that this division of the psyche into three parts is necessitated by psychological facts which were roughly at least perceived by Plato and Aristotle. Undoubtedly some differentiation between the deep-lying dynamic forces of the mind (id), those connected with perceived reality (ego), and those connected with social responsibility (superego) is necessary. Psychoanalysis often speaks of ego and superego and id in the fashion in which medieval philosophers spoke of the Christian soul. The ego takes on all the properties of a selfish Homunculus who pulls the strings for what the psychoanalysts call ego functions: the superego is similarly thought of as a more or less conscious moral Homunculus controlling superego functions: and the id is an unconscious nasty little Homunculus controlling id functions. Freud probably more than any other modern psychologist has discredited the animistic prescientific psychology of the Christian theologians. But as he did the spade work for discrediting the instinct theory of the nineteenth-century biologists and then failed to throw it over completely, so also he prepared the way for a field-theoretical psychology of personality dynamics without really ridding himself of all the characteristics of demonology. It is now probably possible to express the psychological interrelationships which Freud theoretically deduces from ego, superego, and id on the basis of field-theoretical constructs. We shall return to this problem in connection with our discussion of experimental psychopathology in Part V.

Many other concepts of the Freudian psychology are in definite need of clear and unambiguous definition. These concepts are undoubtedly dynamical and field-theoretical in nature without being as methodologically adequate as we could wish them to be. Here we shall take space to speak of only a few of these. The whole idea of libidinal progression and regression makes use of a dynamic concept of directional change without being based on any mathematically adequate conception of direction. Freud has been forced, in accounting for these things, to fall back upon mechanical and geological analogies which while pedagogically valuable as illustrations by no means clarify the real dynamic problem. Lewin (1937) has pointed this out in an excellent discussion of the relationship between topological psychology and psychoanalysis.

The whole problem of reversibility of psychological growth process is a very difficult one. That there can be psychological regression independent of physiological growth processes is, I think, an indisputable fact. On the other hand, the probability that in such cases physiological growth processes do not reverse themselves entirely makes it highly unlikely that we may consider regression as a direct reversal of a total process. The behavior of an extremely regressed psychotic individual is not by any means the exact equivalent of the behavior of a very young child. Quite frequently psychoanalysts speak as if it were, and this difficulty comes about through lack of any adequate definition of direction of regression.

The idea of repression, which is so basic to psychoanalytic theory, is another concept which needs methodological clarification. Since Freud accepted inner biological urges and inner dynamic forces as a basis for developing his theory, repression becomes a matter of the ego forcing material unacceptable to the conscious into the unconscious. The only way we can really visualize this is that the ego is a small person within the psyche of the individual, who is able to get rid of unacceptable thoughts by dropping them into the unconscious. If it is true that psychological forces are forces within the psychological field rather than within the individual, then the theory of repression must be rewritten to take into account the structure of the environment. By so doing, it would be possible to bring the Freudian theory into good general agreement with the modern psychological theories of remembering and forgetting.

To mention only one other important need of clarification of Freudian concepts, let us take the idea of reaction formation. Reaction formation, as we have seen, consists in turning behavior into its diametrically opposed form to protect oneself against anxiety and to strengthen repression. Squandering money is to be considered as a sublimated form of the spreading of feces, hoarding of money is called a reaction formation against this type of behavior. It is easy to see that by allowing opposite behaviors to be accounted for as the continuation and reaction formation of the same basic mechanism there is little possibility of bringing Freudian theory to disproof. From the standpoint of modern operational logic, a theory must be expressed in such a way that it may be proved. This is surely the case with the Freudian theory. On the other hand, from the standpoint of modern methodology, the evidence or experiment which is designed to prove the theory must be one which could have a possible

negative outcome and so disprove the theory. At the present time, many of the concepts of psychoanalysis are undoubtedly developed in such a way that only proof and not disproof is possible. This is not to be taken to mean that nothing like reaction formation occurs. As a matter of fact, anyone who has had clinical experience must realize the value of a concept like reaction formation. On the other hand, for both theoretical and practical reasons some more definite clarification of what causes the development of a symptom in one individual and a reaction formation in another is quite necessary. The criticism which we made of the concept of reaction formation is applicable to many of the other Freudian mechanisms. It is particularly applicable to the interpretation of symptoms in disease. The practicing analyst gets around this difficulty by speaking of overdetermination. When he speaks of overdetermination, he means that, whenever there exists the possibility that different symptoms may develop, the one chosen has more causal factors in its favor than the others. Even so, most competent lay critics and many analysts themselves recognize the methodological shortcomings of Freudian theory in this respect.

All these conceptual, methodological difficulties of Freudian theory undoubtedly represent a transition from class-theoretical psychology to a field-theoretical psychology. Freud started his work when psychology was purely a class-theoretical science and ended it when psychology was becoming a field-theoretical science. In all fairness, we may say that this transition is being made more because of the efforts of Freud than because of the efforts of any other individual. It would be too much to expect that any one individual could complete such a transition. There is some danger that the great accomplishments of Freud will be taken as works of such genius that some individuals will hesitate before making changes in the methodological basis of Freudian theory. This is the danger of doctrine becoming rigid and inelastic out of respect to a very great human genius. Freud himself would certainly be the last man to encourage such procedure. From his first writings to his last, Freud introduced changes in the theory, and the great majority of these changes were toward making the theory more scientific. It is inevitable that sooner or later the last aspects of class-theoretical thinking in psychoanalysis will be overcome.

There are other aspects of psychoanalysis to be criticized beside the conceptual methodological ones. Psychoanalysis is the outcome

of a clinical methodology. In this lies both its strength and its weakness: its strength, because in the clinic one meets really important psychodynamic problems face to face, in their raw form, often without the superficial veneer of socialization and civilization. From really talking to people about their troubles, from really asking them what they actually fear and hate and love, analysts are able to uncover the most vital information about underlying psychodynamics. Clinical research, however, is fraught with sources of error. In some of the older medical disciplines, like neurology, the sources of error of the clinical method have become notorious. Neurology today, despite the fact that originally our most valuable ideas concerning neural functioning came from the clinic, is chiefly furthered by experimental research. We believe that, just as experimental physiology developed systematic physiology as we have it today and experimental neurology developed systematic neurology as we have it today, experimental psychology may eventually put psychopathology on a more sound scientific basis. But no matter how much precise experimental investigation changes our opinions of psychodynamics, the human race will always be indebted to Sigmund Freud for the first great systematic pioneer research in this field.

3. Other Psychoanalytic Literature outside the Scope of This Work

In our presentation of psychoanalysis, we had only space to deal with those aspects of the theory which are most important for problems of psychopathology and the normal personality. Freud and the psychoanalysts have dealt with many other topics from the general psychoanalytical position. The following paragraphs, which are little more than a bibliographical note, can only hope to give the reader some idea of the other fields investigated and to call his attention to the most important works in each of them.

Studies in Organic Medicine.—The psychoanalytic theory, in accepting the organismic view in psychopathology (*i.e.*, that there are psychological and physiological problems in all mental diseases), also accepts that there are psychological factors in all physical diseases. With this postulate, the dichotomy between mental and physical disease disappears. The first important psychoanalyst to deal with this concept was Ferenczi (1928) in his theory of the pathoneuroses. By a pathoneurosis, Ferenczi referred to neurotic conditions which arise because the patient expends so much libido

on a physically sick organ that neurosis in the ordinary sense ensues. Besides Ferenczi's pioneer studies, Felix Deutsch (1922) and Groddeck did important early work in the field of internal medicine. At the present time, the psychoanalytic factors in nearly every physical disease have been investigated and very detailed studies have been made of hypertension, asthma, certain cardiac disorders, and certain endocrinological disorders. This literature is admirably summarized in Menninger (1938) and in Dunbar (1935). Attention should also be called to the journal *Psychosomatic Medicine*, which specializes in this field. The paper of Benedik and Rubenstein is a good example of what can be done in this field. The medical student can certainly read some of this literature with profit.

Studies in Sociology and Anthropology.—That psychoanalysis, which is concerned in such detail with the psychology of the family drama, should have implications for sociology and anthropology is easily understood. Freud himself has made important contributions to this field in his books, *Totem and Taboo* (1927) and *Group Psychology and the Analysis of the Ego* (1922). Today the importance of psychoanalysis for sociology and anthropology is widely recognized. Some other individuals who have dealt with these topics are Fromm, Horney (1937), Glover (1933), Hopkins, Dollard (1937), and Brown (1936*c*). The sociology student could certainly read all these works with profit.

Studies in the Field of Aesthetics.—The artist and his audience are both psychological organisms and it would be strange if psychoanalysis had nothing to say about art. Certain literary artists, as will be clear from our discussion of genius, intuitively anticipated the findings of psychoanalysis and expressed them in a poetic fashion. We need merely to mention that the very name of the Oedipus situation is taken from the Greek tragedy and the whole of Shakespeare's *Hamlet* is concerned with the same famous theme. Actually, there are four distinct problems here; the form of the art, the psychological aspects of the content of the art, the psychology of the artist, and the psychology of the audience. Freud again made the most important first contributions to this field in his works on Michelangelo (1924*a*, Vol. IV), Leonardo da Vinci (1916), Keller (1924*b*, Vol. IX), and Jensen (1924*b*, Vol. IX). Also important in this field are the studies of Bonaparte on Edgar Allan Poe, Reik on Goethe, and the works of Sachs and Rank (1914) on problems of aesthetics. Students of art and literature will be well rewarded by reading some of them.

Studies in the Field of Philosophy.—Our present understanding of the importance of the family drama has led to studies in social and speculative philosophy. Freud himself has published an important criticism of religion in his *The Future of an Illusion* (1928): his *Civilization and Its Discontents* (1930) is probably one of the keenest essays in the analysis of modern culture.

Bibliographical Note

Freud has been criticized on all sorts of grounds. Most of the morally incensed critics are not to be taken too seriously. McDougall (1926), Dunlap, Woodworth, Hollingworth (1930), and Wohlgemuth are psychologists who have attacked psychoanalysis. Most of these attacks are now outdated. Horney's two books taken together are the most recent attack on Freudian psychoanalysis undertaken by a psychoanalyst. The reader who studies them should also study Alexander's (1940) excellent rebuttal. The author has written a series of methodological papers on psychoanalysis (1934, 1937*b*, 1938, 1940), on which this chapter is partially based. Of particular interest to psychologists will be the symposium on psychoanalysis by analyzed psychologists in the *Journal of Abnormal and Social Psychology* in 1940.

CHAPTER XIII

OTHER THEORETICAL APPROACHES

1. The Scope of This Chapter

We have devoted the last four chapters to a rather complete presentation of psychoanalysis. We have attempted to present it in all its implications and to give at least the chief ramifications of the theory. We have chosen the psychoanalytic theory for the most complete presentation, because it is the most complete and systematic theory of personality genesis on a psychological basis. It would be misleading not to say something about other schools which attempt to develop psychodynamic theory but which deviate more or less widely from psychoanalysis, and something about other types of theoretical approach. In this chapter, we shall discuss certain theoretical positions in the field of psychopathology. Since the theory of psychoanalysis was presented in some detail, we may present the other theories in much less space. These theories deviate from psychoanalysis more or less widely, but psychoanalysis was the father of them all. In other words, as we saw in Chap. VIII, all the theories agree that symptoms are caused, have significance, and are economical. They agree that certain basic urges meet frustration so that personality genesis becomes a matter of socio-psycho-biology. They disagree as to the nature of the basic urges, as to the nature of the chief frustrations, and as to the nature of person structure. Consequently, we shall not present these theories as completely independent systems, but only in the aspects in which they differ from psychoanalysis. The author believes this procedure is quite proper in its emphasis, because today it is increasingly realized that psychoanalysis is the most systematic and probably scientifically the best founded.

Besides the psychodynamic approaches, however, there are numerous other theoretical approaches in the field of psychopathology. None of these represent systematic schools, as the various systems of psychodynamics are rather theories with regard to certain aspects of personality structure or personality genesis. Among these are the

characterological approach, the sociological approach, certain endocrinological theories, and biochemical theories. We do not hope to familiarize the reader thoroughly with all the aspects of these various approaches, but we do hope to make him cognizant of the existence of these other theoretical positions and of some of the problems raised by them. The advanced student who is interested in gaining as complete a picture of the other schools as we have given of psychoanalysis must read further in the literature to which we shall refer in the course of this chapter.

2. Psychodynamic Schools Deviating from the Freudian

The Individual Psychology of Alfred Adler.—The Viennese physician Alfred Adler was one of the earliest psychiatrists to interest himself in the Freudian theory of psychoanalysis. When Freud began to gather around him a group of adherents, Adler was one of the most brilliant and promising. Adler himself had a strong and independent personality, and it was not long before he found some of his own ideas in conflict with those of Freud. Just who was to blame for the personal bitterness which later characterized the relationship between the two men will probably never be clear. By the year 1910, Adler represented a position which deviated in many respects rather sharply from the Freudian. By 1911, the conflict between the two theories had become important enough that Adler and his followers branched off from the main line of psychoanalytic investigation. Since Freud was the recognized leader in the school, Adler felt that the term "psychoanalysis" should be utilized by Freud and his more immediate followers, and he adopted the name "individual psychology" for his own system. Adler and his followers, hence, became a separate school or group with their own journals, their own institutes, their own requirements for practitioners. Although this group of Adler's has never had the prestige, particularly with the medical profession at large, that the Freudian group has gained, Adler still has a number of followers and has some influence in psychiatry.

Adler accepted Freud's insistence on determinism. He accepted the idea of personality growth and of differentiation through the meeting of frustration and he accepted at least a modified form of the technique of psychoanalysis as most suited to investigate psychodynamics. He disagreed rather sharply from Freud regarding the

mechanisms of repression and resistance, the nature of infantile psychosexual genesis, and the importance of the unconscious. He denies repression, rejects psychosexual genesis, and denies the validity of the distinction between conscious and unconscious. In the place of libidinal and aggressive urges, he posits a striving for prestige on the basis of masculine protest. Prestige is sought in three spheres—the economic, the sexual, and the social. The basic complex in determining personality genesis is the inferiority complex. Ideas from the conscious or unconscious are not differentiated.

Adler's chief criticism of Freud is that Freud overemphasized the role of the sexual in life, particularly the Oedipus situation and the castration complex. When Adler broke with Freud, Freud was chiefly concerned with libido theory and had not yet introduced the theory of the death instinct, so that to a certain extent the Adlerian criticism was justified. Adler, to be sure, stated that the sex elements in the psychological process of personality growth were of very great importance, but he said that sexual goals were part of the general goal of personal prestige. While Freud said the chief motivating force for human beings was the desire to love and be loved, Adler said the chief motivating force was the desire to stand out among one's fellow men. This desire he calls the prestige motive and says that the three chief forms of prestige for which individuals strive are social, sexual, and economic. By the drive to sexual prestige, Adler means more or less what Freud means by libido. By social prestige, Adler means the prestige gained by standing out among one's fellow men as a leader in social enterprise. By economic prestige, Adler means the prestige which comes from successfully making a living. Thus Adler accounts for our desire to belong to all sorts of exclusive groups, such as clubs, fraternities, societies, and the like, our desire to stand high in the various professional or occupational hierarchies, our desire to belong to various groups in which the common herd does not have membership, as coming from the social aspects of the prestige motive. Our desire to get ahead economically, to make money, comes from the economic prestige motive. Adler considers sociological factors to be more important than Freud does. The motive force behind repression with him is the force of community feelings. Now it is quite true that Adler has given a very good description, in the sociopsychological sense, of most of the things we are concerned with in our contemporary industrialized civilization. It is certainly the ambition of most

college students, for instance, to love and be loved in the sexual sense, to belong to the various clubs, fraternities, and societies, both professional and social, and to have enough money to dress well and go places. The college student further daydreams about himself as being the possessor of a beautiful wife and several handsome children, being a member of the exclusive clubs of his environment, and living in an expensive house in the best residential district of his community. It is probably also true that most individuals who could arrive at this mode of life would do so. All of us are not attractive to the opposite sex, popular with our own sex, and successful in business. Failure to arrive at any one of these goals undoubtedly leads to change in our personality make-up. The Adlerian theory fits contemporary American social ideals so patly that it is small wonder that, some years ago, Adler was so much the vogue that the college student on first hearing it was inclined to think the Adlerian theory more adequate than the Freudian. We shall see later, however, that the Adlerian theory is superior to the Freudian only in a very superficial fashion.

Adler also bases much of his theory on infantile developments. Undoubtedly his best study is that of organic inferiority (1917*a*), in which he points out that all of us, or at least practically all of us, are actually inferior to certain others in their physiological organs. According to Adler, the child very early perceives that he is weaker both physically and mentally than the adult. Adler first pointed out that one of the ways in which the child realizes his organic inferiority is in the smallness of his penis. The girl child is particularly concerned with this because she has no penis at all. This gives rise to the rather well-known Adlerian theory of penis envy, which has been accepted in psychoanalysis. The realization of organic inferiority of the child causes the child to develop an inferiority complex. According to Freud, all children develop an Oedipus complex. According to Adler, all children develop these definite feelings of inferiority. The psychology of the inferiority complex is again undoubtedly a real one. All of us at one time or other doubt that we are as good as the next man, wish that we were stronger or more beautiful, or more popular, or more powerful. From these feelings of inferiority, the child develops the desire to become superior, to grow, and to meet the adult on an equal footing. Thus feelings of inferiority give rise to the masculine protest. The masculine protest against the inferiority complex plays very much the role in the Adlerian theory that

overcoming the Oedipus complex through psychosexual genesis does in the Freudian theory. Struggle between the masculine protest and social reality thus goes on, and out of this struggle the personality has its growth and differentiation. Whether the individual develops into the normal adult or into the psychotic or neurotic personality, becomes sexually perverse, or develops a character defect depends on this conflict. Many of the points which Adler made against Freud had some slight value at the time he made them. The Freudian theory, however, has incorporated every valuable criticism from Adler without falling into the looseness of many Adlerian concepts and without sacrificing the undoubtedly valid concepts of repression, infantile sexuality, and the unconscious. If Adler's theory seems better to fit our conscious conflicts than does Freud's, it does so only by sacrificing the biologically well-founded ideas of Freud on the unconscious and sexuality. Adlerian psychology fails to go far beyond the conscious conflicts between the ego and society, which are very superficial compared with the deeper ego-id conflicts.

Despite the fact that the emphasis on inferiority complex and the Adlerian idea of penis envy and masculine protest are valuable and original contributions of Adler to psychoanalytical literature, the status of the individual psychology as a science is not nearly so secure as that of psychoanalysis. Adlerian psychiatry is particularly unsystematic. The individual psychologists are unable to account for the interrelationships of psychoses, perversion, the normal adult personality, and character defects. We shall see in Part IV that orthodox descriptive psychiatry can very well be arranged on the framework of the psychoanalytical theory of psychosexual genesis. The Adlerians, on the other hand, are not able systematically to picture descriptive psychiatry in terms of infantile inferiority. Although Adler has made valuable contributions and although much of what he says shows keen insight into the superficial situation, his individual psychology cannot be considered as a rival theory having the same status as psychoanalysis. The author believes that the psychopathology of the future will assimilate the single valuable contributions of Adler, but that the school of individual psychology will soon be of only historical interest.

Adler has been a very productive writer, first of rather scholarly treatises on psychoanalysis and more recently of popular potboilers on the psychology of personality. The reader who wishes to familiarize himself further with the school of individual psychology is

advised to read only the early books. Of these undoubtedly the best are *Organic Inferiority* (1917*a*) and *The Neurotic Constitution* (1917*b*). His later popular works have little to recommend them to the serious student of psychopathology (1929*a*, 1929*b*, 1931).

The Analytic Psychology of C. G. Jung.—Another early follower of Freud and one who made decided contributions to the earlier psychoanalytical movement and later left it (in 1912) is the Zurich psychiatrist C. G. Jung. Jung was particularly important in the early days of psychoanalysis because he was one of the first to introduce psychoanalysis outside the limits of the Vienna medical center. Jung's career parallels Adler's. At first a staunch supporter of Freudian psychoanalysis and contributor to it, he was very highly esteemed in psychoanalytical circles. Later, like Adler, he found himself at odds with Freud concerning libido theory and later still he became the central figure of the second most important heretical school of psychoanalysis, that at Zurich. Jung's contributions to psychopathology, unlike Adler's, are not limited to the field of psychoanalytical investigation. The present paragraphs will be concerned only with his psychoanalytical position and later we shall say something about his contributions to characterology and psychiatry.

Like Adler, Jung found it necessary to quarrel with the Freudian libido theory before the Freudian theory of the death instinct had been adopted. Jung continues to use the concept libido but defines it in his own fashion. With Freud we saw that libido meant the urge which brings people into close physical contact. With Jung, libido becomes a rather generalized gregarious or social instinct, the general force which brings people together in any form of social contact, *whether it be intimate or not.* Jung further developed his own ideas as to the role of the unconscious. We have seen that, according to Freud, the unconscious is, to be sure, biologically conditioned but develops separately in each individual. Adler denies its importance entirely. Jung, however, introduces the idea of the racial unconscious and so believes that not only the strivings of the individual but those of the whole race are represented in it. Thus, in dreams we have not only to interpret the personal unconscious motives but the racial unconscious motives. Dreams furthermore are not only the resolutions of conflict in sleep. They also are preparations for the future and as such have a prophetic significance. This part of the Jungian theory, dealing with the racial unconscious and the prophetic nature of dreams, cannot be called scientific.

Jung, too, has advanced his own ideas on the structure of the personality. The conscious part which is in contact with reality is called the "persona." The central core of the conscious is the ego. There is also some personal unconscious. In the lower levels of unconsciousness, standing in the same relation to the unconscious as the ego does to the conscious, is the "anima" or unconscious femininity in the male and the "animus" or unconscious masculinity in the female. Inner subjective reality is mediated by them. Jung thus while accepting determinism and personality genesis almost completely rewrites the Freudian theory.

Furthermore, Jung's theory also lacks the systematic aspects of the Freudian theory. There is no clear picture as to how the various types of reaction to frustration become actualized, nor is there any systematic theory of the psychoses. All these facts lead us to believe that, as with Adler, the many positive contributions of Jung will become assimilated into the regular psychoanalytic literature and the Jungian school will soon be only historical in importance. As this presentation of Jung is likewise very sketchy, the student who wishes to understand more about the Jungian psychology should read, besides *Psychological Types* (1923), the earlier studies on *Dementia Praecox* (1909), and his *The Theory of Psychoanalysis* (1915). Jung, too, in recent times has published a series of popular treatises on personality (1933, 1939). The author considers these later writings of Jung almost worthless.

Minor Variations in Psychoanalytical Theory.—There are a considerable number of psychoanalysts, who, while accepting the Freudian theory in most of its important aspects, have introduced minor variations in it or have stressed certain points. Most of these individuals have not tried to set up separate schools and on the whole consider themselves as psychoanalysts. However, they are not orthodox psychoanalysts and are considered beyond the pale of orthodox psychoanalysis by the International Psychoanalytic Society. We shall have space only to mention several of these whose theories will be met by the reader who goes into psychodynamic theory at all extensively in the future.

Otto Rank accepts most Freudian theory, but wishes to begin the catalogue of important traumatic experiences earlier than Freud does. Rank says, and the idea is at least plausible, that the change from being fed through the umbilical cord to the process of being fed through the mouth is perhaps an even greater change than that

brought about in the early oral period. Consequently, the first major traumatic experience is the trauma of birth. Rank claims this must always be taken into consideration not only in the therapeutic analysis but also in the building of theory. Rank has presented this aspect of his theory in great detail in the book, *The Trauma of Birth* (1929). Undoubtedly from a biological standpoint the act of being born represents a traumatic experience to the organism. The whole *modus vivendi* of the fetus is upset when it becomes the neonate. An adaptation which was wholly passive is upset and the first type of activity (breathing) is required from the newborn child. There is often, as indicated by dreams, folklore, poetry, and sometimes wishful thinking, a desire to return to the mother's womb.[1] Freud accepts the value of the birth trauma as a trauma on a biological level but because of the almost complete lack of psychic development at birth refuses to grant it the psychological importance which Rank claims for it. In this Freud is right. The interested reader will find Freud's criticism of Rank in *The Problem of Anxiety* (1936).

Stekel is another onetime prominent psychoanalyst who has suggested many innovations in the theory. He accepts certain positions of Adler and Jung and believes that by educating the patient the course of a psychoanalysis may be greatly shortened. His work is rather an eclectic hodgepodge and the author believes his position to be even more untenable than Jung's. Interested readers may wish, however, to look into his *Psychoanalysis and Suggestion Therapy* (1923) and decide for themselves.

3. The Characterological Approach

Besides the various psychodynamic theories, the most important psychological (as opposed to physiological) approach to problems of personality is that of the characterologists. Since the time of Hippocrates, scientists have been attempting to find certain types of men, or subspecies of men, and trying to show that associated with these types there are certain psychological differences. Most of these theories suppose that these differences arise constitutionally and are hereditary. Undoubtedly there are outstanding constitutional and anatomical differences among the various races, and these differences have led to various theories of racial psychology. The whole prob-

[1] Ferenczi (1938) has used this urge as a part of his highly speculative, but very genial, work on genital theory. In this, he accounts for coitus, sleep, and death itself as an urge to return to the embryonic state.

lem of racial psychology cannot concern us here. We must, however, point out that practically all research in the field has pointed to the fact that no racial differences of a psychological sort have been found which may be attributed to biological facts alone. In other words, the real psychological differences between whites and Negroes, and gentiles and Jews, occur not on the basis of biological differences but on the basis of differences in cultural patterns which are realized to be largely environmentally conditioned.

Besides interest in racial types, however, there has been interest in subspecies of *Homo sapiens* of a general psychological sort and of a more specific constitutional sort. Hippocrates, as is well known, distinguished men into choleric, phlegmatic, melancholic, and sanguine types. He did this on the basis of the prevalent theory of bodily humors. *Phlegmatic* individuals were supposedly characterized by a superabundance of phlegm and because of this were supposed to be slow and easygoing psychologically. *Sanguine* individuals were characterized by a superabundance of blood and were for this reason supposed to be hopeful and confident psychologically. *Choleric* individuals had a superabundance of yellow bile, which led to the psychological characteristics of being quick to rage, changeable, and inclined to fly off the handle. *Melancholic* individuals had a superabundance of black bile and were inclined to be slow-moving, depressed, and sad for this reason. The realization of the complete inadequacy of Hippocrates' underlying physiological theory led to the abandonment of it as a serious theory in both psychology and medicine. The mere continuance of the characteristics of his theory, however, as names for existing personality types which everyone understands, shows that it may have some real significance.

Following Hippocrates, the great Roman physician Galen enlarged on his type-and-humor theory, and such characterologies were frequent through the Middle Ages. In general, as in the case of all Middle Age science, the theories became less and less scientific rather than more scientific and with the growth of modern science fell into disrepute. Again in the eighteenth century, however, characterology became of great popular vogue and gained again a certain amount of scientific interest.

Among the characterological schools of the eighteenth century, the physiognomists, of whom Lavater was the leader, were the most important. The physiognomists believed that psychological characteristics were associated with bodily build through the general con-

tours of the body, particularly the contours of the face. These individuals were followed by the phrenologists in the nineteenth century, of whom the chief representatives were Gall and Spurzheim. They believed that the contours of the skull were indicative of certain psychological characteristics. One still sees evidence of the activities of the phrenologists in poorer sections of our great industrial cities, with the familiar charts showing areas of the skull marked "animativeness," "acquisitiveness," "philanthropy," etc. In the nineteenth century, the Italian criminologist Lombroso developed a theory that the characters of certain antisocial individuals, particularly criminals, were determined through a combination of physiognomic and phrenologic traits. Psychological degeneracy, then, was revealed in the presence of certain stigmata such as prominences on the skull, cauliflower ears, misshapen noses, and the like. Following the Lombroso school, there was a long interest in graphology or the science of distinguishing character through handwriting. Those constitutional differences which lead to differences in the handscript were supposed to create different character types.

By the turn of the twentieth century, the work of all these schools had fallen into practically complete disrepute among scientists. Carefully controlled experimental studies of estimating psychological character from photographs did much to discredit the physiognomists, as these experiments invariably turned out negative. The discovery of the chief areas of localization in the anatomy of the brain discredited the phrenologists by showing that there are no specific brain centers for the type of trait which the phrenologists attempted to correlate with bumps on the head. Investigations by later schools of criminologists put the Lombroso theory into disrepute. The fact that even experts in handwriting could do little to distinguish the psychological characteristics of handwriting of people unknown to them where the context of the writing was not personal also discredited the graphologists.

The mere fact that so many people for so many years have been interested in trying to correlate psychological traits with physical characteristics or have been concerned with trying to isolate various psychological or physical types is evidence at least that such types may exist. In the twentieth century there has been a revived interest in typology and characterology. The modern typologists and characterologists are concerned with the possible correlations between psychological behavior and underlying constitution. The

scientific ones among them, however, are desirous to take into consideration what is known about both biological constitution on the one hand and modern psychological theory on the other. It may be that through modern characterology we shall develop the knowledge of certain specific problems of psychiatry, such as that of the choice of disease. Considering all we have learned in the last chapters about the effect of barriers in the psychological field upon the development of the personality, it scarcely seems possible that any psychological characteristics are for all time predetermined in the germ plasm or the constitution. Since, on the other hand, we believe that hereditary factors enter into all problems of behavior along with environmental factors, it may be that constitutional factors, such as bodily build, or psychological type factors, like introversion and extraversion, are contributing factors to the finished personality. The work in the field of modern scientific characterology is so new and there are so many rival schools that it would be simply confusing to attempt to cover the whole field in a book of this nature. We must content ourselves with giving a brief résumé of the leading characterological schools and some indication of the possible usefulness in each distinction.

The Concept of Introversion-Extraversion.—The most widely known of the modern character types are those which C. G. Jung (1923) popularized as introverts and extraverts. According to Jung, the introverts have a subjective attitude; they tend to withdraw from the world of fact into the world of fantasy. They are chiefly affected by stimuli arising within the world of inner experience. In terms of his (not Freud's) libido theory, in the introvert the libido is turned inward. The extraverts, on the other hand, have realistic objective attitudes, they tend to react to the world of physical reality, and they are chiefly stimulated by the real world. Their libido is turned outward. Hence, the distinction *intro-* and *extravert*. Jung himself was concerned with the perceptual-cognitional attitudes of individuals rather than with their social attitudes, and it is quite possible for introverts to have many social contacts and for extraverts to be socially withdrawn. The distinction as Jung originally used it was concerned with the way the individual perceived and thought about the real world. This is important to point out because, in the hands of some American social psychologists, introvert comes to mean a socially withdrawn and self-sufficient individual while an extravert is a "hail fellow well met." Undoubtedly social attitudes

often follow modes of cognition and perception and in general the introvert is inclined to be more withdrawn than the extravert. Between the two and more balanced is the *ambivert.* Jung illustrates his characterological distinction with historical biographies and case histories. He goes on to make distinctions between extraverted thinking, feeling, intuitive, and sensational types. These finer distinctions cannot be enlarged upon here. Similar to Jung's two types but not identical to them are the distinctions of James, Rorschach, and Spranger. There has been considerable work by American experimentalists on the concepts of introversion-extraversion.

The idea of introversion-extraversion is undoubtedly of some significance in psychopathology. Schizophrenics, as we shall see, may be looked on as extremely introverted and manic-depressives as extremely extraverted. No one today can seriously believe that the total personality is predetermined by a constitutional personality type, but constitution undoubtedly, as even Freud himself admits, may play a considerable part in the depth of regression and the choice of neurosis and may have something to do with fundamental modes of reacting. It is not entirely clear to what extent either introversion or extraversion is constitutional.

Kretschmer's Characterology Based on Physique.—According to Kretschmer, the various personality types have an affinity for a certain type of physique or bodily build and, when individuals having such physique become mentally ill, they tend to develop certain forms of mental illness. Thus, extraverts (or cyclothymic temperaments, as Kretschmer calls them) tend to have the pyknic body build and when psychotic to develop manic-depressive psychosis. The introverts (or schizoid group) on the other hand tend to have the asthenic[1] or athletic body build and when psychotic tend to develop schizophrenia. In addition, there is the dysplastic body type. The chief physical characteristics of the various Kretschmerian body types have been summarized nicely by Nicole as follows:

The grouping of physical types, according to Kretschmer, includes the following four main classes:

A. The Athletic Type.—Strong skeleton, powerful musculature, fine chest, and free neck. Hands and feet large, at times even reminiscent of acromegaly. Biologically this type seems a milder form of the African

[1] In later publications of Kretschmer, the designation leptosome or leptosomatic is used for this type.

Negro physique and—going farther back in the evolutionary scale—of the gorilla.

B. The Asthenic Type.—The individuals are usually thin and long. The skin is dry, the shoulders are narrow, the arms lean and long, and the chest flat. Viewed historically, this type would seem to spring from the chimpanzee and the earlier Aryan races. It is a type frequent in dementia praecox.

C. The Pyknic Type.—This one is very different. The body cavities (head, thorax, abdomen) are large, there is a marked tendency to deposition of fat, and the contours of the body are rounded and graceful. The face is soft and broad and the hands short and wide. In many ways, this make-up seems to hark back to the Mongol races and—in the animal series—to the orangoutan.

D. The Dysplastic Group.—This is a mixed one, comprising mostly types that approximate to mild forms of glandular syndromes. For example, we have the elongated eunuchoids with their deficient secondary sexual characteristics; the eunuchoid and polyglandular fat abnormalities, and infantile and hypoplastic varieties showing marked underdevelopment and disproportion. These types of Kretschmer have been added to by other writers, notably by Rodalie, while constitution has been studied by Willemse (in delinquency) and also by Stockard.

So much for the physical aspects of personality. The next step was to correlate it with the mental side, and this not only in respect of confirmed mental derangement, but of "normal" individuals also. First as regards psychoses. Once elimination has been made of those disorders directly attributable to accidental and physical causes, such as toxemia and exhaustion where the prominent clinical features are delirium and stupor, and epilepsy, and general paralysis, we have left the important class known as the biogenetic psychoses. These can be divided into two main groups:

1. *The Cyclothymic* (or manic-depressive) *Group.*—The disorder is principally in the emotional sphere and is remarkable for its tendency toward rapid though temporary recovery followed by relapses and recurrences. The personality, although deranged, is to a marked degree unified; there is no apparent disharmony between the different components of the patient's conduct; he is in fact what Bleuler calls "syntonic." He is, too, in good contact with his surroundings and he responds to environmental stimuli.

2. *The Schizophrenic Group.*—This includes the dementia praecoxes, the paraphrenias, and paranoias. They all evince to a varying extent a failure of synthesis; they appear to be divided within themselves; there is a lack of correspondence between ideas on the one hand and emotion on the other. Further, there may be expressed the phenomenon of antithesis known as ambivalency. In the milder forms, we recognize the "shut-in" personalities of Hoch, that are so reminiscent of Jung's introverts.

The factor of predisposed personality had already been stressed by Meyer and others, and Kretschmer enlarged his classification so as to include all types, normal as well as abnormal, thereby emphasizing the points of similarity between sanity and insanity, rather than those of dissimilarity. His two great groups became *Cycloid* and the *Schizoid*, and only the definitely abnormal among them were termed cyclothymics and schizophrenics. The former—the normal cycloids—were recognizable from their sociability, good nature, expression of emotion, and tendency to alternating modes. In contrast to these, the normal schizoids exhibit asociability, dry and unsympathetic outlook, eccentricity and restlessness, perhaps coupled with a brilliant intellect. [From J. E. Nicole, *Psychopathology*, Baillière, Tindall & Cox, London, 1934, pp. 98–100.]

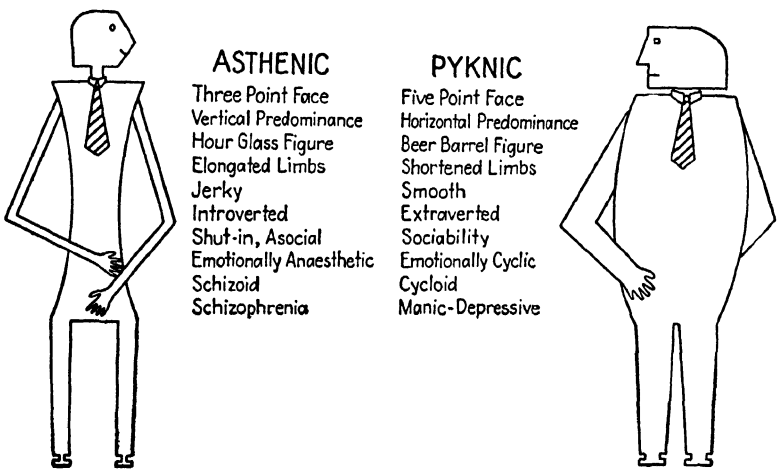


FIG. 9.—Showing the relationships between Kretschmer's body types, personality traits, and disease affinities.

The chief physical characteristics and the chief related mental characteristics of the asthenic and pyknic types are shown schematically in Fig. 9.

Although no one has found perfect correlation between mental disease, body build, and personality type, there is now abundant emphasis that there is some affinity between these things. A well-trained clinical psychiatrist can walk through a ward of psychotic individuals and diagnose these much better on the basis of physique than chance alone would allow. The use of the Kretschmer types has some value in practical psychiatry.

Again many detailed questions remain to be solved. Is the basic body build really determined in the germ plasm? Can individuals

whose basic personality changes show also such striking changes in bodily build? All babies are pyknic. How do so many happen later to become asthenic, athletic, or dysplastic? Even in bodily build environmental influences play a role. Until more thorough studies have been made, we can with Kretschmer attribute some causal effect of the physique on total personality but cannot make it either basic or constitutional as he attempts to do.

Other Characterological Schools.—There are many other approaches to personality from the standpoint of characterology. Roback has devoted a big book to abstracting the literature in this field alone. Interested readers may go to it. Besides the work of Jung and Kretschmer, the most interesting modern studies on types from the standpoint of psychodynamic theory are those of Rorschach, Saudek, and Terman and Miles. We shall have something to say about these in the final chapter.

4. The Sociological and Ethnological Approach

It is undeniable that sociological factors have the greatest importance in building the personality. One of the chief shortcomings of psychodynamic theory in the past has been an overemphasis on the individual and familial psychological factors to the neglect of the larger sociological and cultural factors. We have already stressed the importance of the social factors in the psychological field in the first chapters of this book. The author in his *Psychology and the Social Order* has given his views on the social determinants of personality at length. The fact remains that in practically all cultures, even the primitive ones, individuals show signs of personality maladjustments which arise on the basis of frustration of emotional urges. The occurrence of the chief psychopathic behavior forms, although statistics vary as to incidence of types, in the various modern civilized cultures is also an undoubted fact. We must consequently conclude that, although cultural differences make for personality differences, much of the personality is laid down by psychobiological factors and that the cultural modifications are secondary.

The field of ethnology is a rich one in which to test the basic postulates of psychodynamic theory. Studies in this field already undertaken do much to contradict the instinctual basis of psychodynamic theory. We have already seen, however, that psychoanalytic theory does not depend for its systematic validity on a strict

adherence to the instinctual basis of psychic urges. The attempt to deduce everything in the personality from the sociological and ethnological structure of a society is probably as much mistaken as the attempt to deduce everything in the structure of the society from the psychobiological aspects of the personality. To repeat the basic contention of organismic psychiatry, "The personality has its genesis in the way in which individuals of specific biological constitution meet barriers in the psychological field." Most of these barriers are imposed by society and are hence cultural. The nature of a culture, however, is limited by psychological factors just as psychological factors are influenced by the culture. The basic problem which we must investigate in thinking about societal change is just what in the personality may be changed with changes in culture and how far we may change culture without seriously complicating social adjustment because of psychobiological considerations. The author has considered this problem at a more advanced level in a series of papers (1937*b*, 1938, 1939*a*).

The work of coordinating psychodynamic theory with ethnology and sociology has begun from both sides. In the last chapter we referred to the psychoanalytic studies in sociology. Important works raising the problem of the effect of cultural factors on psychodynamics are those of Rivers (1921 to 1926), Malinowski (1927, 1929), Mead (1935), Williams (1934), Kardiner, and Faris and Dunham.

5. Endocrinological and Biochemical Approaches

The theoretical approaches so far mentioned have been from the standpoint of organismic or psychogenic theory. There are many valuable approaches from the standpoint of somatogenic theory. The reader will remember that this book is of necessity limited to the discussion of psychological factors. For the sake of completeness, we wish to mention something of the endocrinological and biochemical approaches.

The greatest advances in modern physiology have been in understanding the role of the autonomic nervous system and the endocrine glands. Since emotions (wishes) have been discovered to be the fathers of both thoughts and actions and since the energy of emotion is regulated chiefly by the autonomic nervous and endocrine systems, it is natural that psychopathologists should study endocrinology.

There is not space in this book to discuss either the anatomy or the physiology of the autonomic and endocrine systems. The average student will remember something at least about them from his elementary courses. The discovery that certain hormones serve as facilitators and regulators of all growth (particularly sexual growth and differentiation) and that certain others are correlated with definite changes in emotion and mood at first led some writers like Berman to think of the endocrines as the final regulators of personality. Such overemphasis on the somatic factor has been more recently discarded, as is shown in Hoskins's more recent book.

The organismic solution to the psychosomatic problem is the only possible one from what we now know about the functionings of both the autonomic nervous system and the endocrine glands. It is as foolish to say that endocrine dysfunction causes emotional dysfunction as it is to say the inverse of this. What we know is the close correlation between these things, and we probably have more detailed knowledge of the emotions than we do of endocrinology. This does not mean that endocrinology should not be studied by psychopathologists. In many cases, endocrine therapy and endocrine surgery are more applicable to personality upsets than psychology. They are borderline subjects to psychopathology proper, however, so we shall have no more to say about them here. The interested reader is referred to the works of Berman and Hoskins.

Besides endocrinological studies, there has recently developed a series of hypotheses about the effect of disbalance in brain chemistry on personality. McDougalls's (1926) X-hormone theory speculates on the presence of an X hormone which may lead to the inhibition of cortical control on thalamic function. MacDougalls's speculative theory is given some support in the work of Bancroft (1931*a*) on the effect of sodium amytal and sodium rhodanate on the inhibition and facilitation of neural impulses in the cortico-thalamic tract. More recently Sakel and Meduna, who have introduced the insulin and metrazol shock therapies, have again shown the importance of biochemistry for the psychosomatic problem. The medical student might well look into these sources. In general, the biochemical approach has the same limitations and shortcomings as the endocrinological. This is not to say that it will not one day be of great importance to psychopathology.

6. Summary

1. Since the psychoanalytic theory has been treated in such detail, the other theoretical modes of attack must be outlined more briefly.

2. Adler's individual psychology and Jung's analytic psychology are compared and contrasted with psychoanalysis.

3. The characterological approach has promise as an adjunctival theory to psychoanalysis. The inadequacies of classical characterology have been partially overcome in the work of Jung, Kretschmer, and others.

4. The sociological and ethnological approaches also show much promise. The relative weight of psychobiological and cultural factors in determining personality may be decided through ethnological study.

5. The endocrinological and biochemical approach have recently shown much promise. These various approaches are not to be considered rival theories to psychoanalysis, but rather as approaches which may supplement psychoanalytic knowledge and refine it.

Bibliographical Note

This chapter in itself has been largely a bibliographical note and the pertinent literature has been referred to. This whole literature is nicely summarized in Nicole, Bentley and Cowdry, and in Allport (1937) for those readers who wish more than we have given but who still do not wish to go to the original sources.

PART IV

PSYCHIATRY

(Written in collaboration with Karl A. Menninger, M.D.)

CHAPTER XIV

PSYCHIATRY AS A BRANCH OF MEDICINE

1. The Psychiatrist and His Training

Psychiatry literally means "the healing of the mind," and so the psychiatrist is the physician who is specially concerned with the diagnosis and treatment of mental disorders. Until fairly recently the term "mental disorder" was used to refer only to those severe forms of sickness called the "psychoses." Although these sicknesses are very frequent they are by no means the only or perhaps even the most important problems with which contemporary psychiatry deals. Psychiatry, the youngest of the basic medical specialties, in recent times has become a clinical specialty of the same importance as internal medicine, surgery, and pediatrics. As a matter of fact, within the last few years psychiatry has come to be recognized as the basic medical specialty which studies all psychological problems. It has also become the art of medical practice which deals therapeutically with these problems. It is based on the sciences of psychology and psychopathology just as internal medicine is based on the sciences of physiology and pathology. Indeed psychiatry has become so important that probably half of the problems which the average physician has to deal with are psychiatric problems, and it has implications of some sort for problems through the whole field of medicine. Today the psychiatrist is perhaps the most highly trained of all the medical specialists.

This growing importance of psychiatry in medical practice is a very recent development, however. At the very first of this book we saw that only toward the end of the nineteenth century did the realization come that what we now call "psychiatric" problems were in any sense medical problems. The somatogenic theory, which was the prevalent one until about the time of the World War, then considered them as problems which would easily be solved by the regular medical techniques. It was only with the growth of the psychogenic theory that the realization came that psychiatry to be effective must be based on a thorough knowledge not only of physics

and chemistry but also of the new sciences of psychology and psychopathology. In the most recent times it is becoming obvious that some knowledge of sociology is also necessary. This change in attitude of the medical profession as a whole toward psychiatry is very aptly illustrated by a comparison of the training of the psychiatrist in the nineteenth century with his training in the twentieth century.

In the nineteenth century for the first time, as we saw, hospitalization of psychotic and psychoneurotic individuals occurred, and for the first time these individuals were institutionalized on a medical as opposed to a purely custodial basis. With the exception of a few great leaders in psychiatric research, the average psychiatrist of the nineteenth century was a general practitioner who preferred the security of an institutional position to the uncertainty of private practice. He finished medical school, learned something about Kraepelinian diagnosis, and fitted the incoming patients into Kraepelin's diagnostic categories. In practice his treatment activities consisted chiefly in seeing that his patients did not harm themselves or the other inmates, and in keeping them in fair physical health. Concerning academic psychology, medical psychology, and psychopathology he knew very little, and his attitudes toward the problems of sexual perversion and characterological defects and genius were more or less those of the layman.

At the end of the nineteenth century, however, academic psychology and psychopathology became systematized sciences and a basis was laid for the development of modern psychiatry as we know it today. Today the training of the psychiatrist requires as a background the training in the ordinary basic sciences of medicine, such as anatomy, physiology, biophysics and biochemistry, and bacteriology, followed by a training in the medical specialties of internal medicine, surgery, and pediatrics, leading to the degree of Doctor of Medicine. He must then fulfill the regular medical internship and upon completion of this devote at least a year as resident physician in a psychiatric hospital. As resident he learns the sciences basic to psychiatry, such as psychology, psychopathology, and, in the most recent times, something at least of sociology and criminology. Included in this training as a resident is some specific training in psychotherapy. He must learn something about suggestive psychotherapy and hypnosis and, in our opinion, if he wishes really to complete his psychiatric training, something about psychoanalysis. The psychoanalyst is the psychiatrist who has fulfilled all the require-

ments for the specialized practice of psychiatry and has studied two additional years in one of the various psychoanalytic institutes. The psychoanalyst usually practices as a full-fledged therapist only after some twelve years of higher education (four years of college, four years of medical school, one year of internship, one year as psychiatric resident, two years in a psychoanalytic institute). This is as long a training as is undergone by any professional specialist in medicine.

The problem of training and treatment is further complicated by the fact that neurology and neurological problems also enter into the picture. The relationship between the nervous system and behavior has, because of spatial limitations, only been touched upon in the preceding chapters of this book. The neurologist is the specialist who deals with the underlying physiological processes in disordered behavior and so is a specialist in certain aspects of internal medicine and in certain aspects of psychiatry. At the present time most psychiatrists have and should have a considerable knowledge of neurology. Judging from the trends of specialization in the past and from the rapidity with which basic discoveries are being made in the field of neurology and psychiatry, however, further specialization is bound to occur and our ideal partnership even of the present should include internist, psychiatrist, and neurologist. With the further development of experimental psychopathology the addition of a clinical psychologist will probably be required.[1]

It is quite likely that the psychological medicine of the future, then, will be practiced along some such lines as the following scheme. The place of practice will be a modernly equipped building Whether we call it a clinic, a hospital, or a sanitarium does not matter much. It will have an operating room for the necessary surgery and laboratories for work in the fields of medical pathology, experimental psychology, and psychometrics. Connected with the staff will be internists, who handle the general problems of internal medicine; neurologists, who make the neurological examinations and diagnoses; psychiatrists, who are concerned with psychiatric diagnosis; and psychologists and psychometricians, who are concerned with the psychological diagnoses. On the side of therapy we shall have specialists in medicinal therapy, specialists in surgery, specialists in the various phases of psychotherapy, and

[1] The role of experimental psychology in psychopathology will be dealt with at length in Part V.

even specialists in sociotherapy. On the diagnostic side, medicine will consist in examining the individual's physiological processes by the methods of internal medicine and laboratory pathology and in examining his psychological processes by the methods of psychiatry, psychology, and psychoanalysis. An individual who has been thoroughly studied in such a clinic will furnish samples of urine, blood, and sputum, samples of neurological behavior, and the history of his emotional and social adjustments, which will include samples of his fears, his dreams, and his associations. In the increasingly popular annual medical checkup of the future, besides the measurement of blood pressure, heart action, and urine analysis, we shall have the measurement of loves and hates, fears and dreams. The physicians' recommendations on the completion of such an examination will of course include therapeutic devices aimed at correcting any disorders in the physiological functions of the individual's life as well as the psychological.

2. The Extent of Psychiatric Problems in the Modern World

On Jan. 1, 1935, there were approximately 470,000 individuals institutionalized for mental diseases in the United States. During that year an additional 150,000 were admitted. Sometime during 1935, 620,000 individuals were in mental hospitals. If one expresses these figures in terms of the general population, it means that about 0.4 per cent of the total population was institutionalized at any given time (*i.e.*, 1 in 250) and about 0.5 per cent of the population was institutionalized at some time during 1935 (*i.e.*, 1 in 200). These figures do not include the many individuals who are institutionalized in small private hospitals or individuals who are mentally ill in their own homes. Landis and Page report a detailed statistical study of Massachusetts and New York, which would indicate that actually at any given time 1 out of 66 or 1.5 per cent of the population are mentally ill with psychosis or severe neurosis.

There are differences in age, social status, geographical location in the statistics on the hospitalized mentally ill. Thus the incidence is highest in the North Atlantic states and lowest in the Southeast. It is difficult to interpret accurately what this discrepancy means. Southeasterners on the whole would be inclined to say that the mode of living in the Southeast was conducive to mental health, while citizens of New England would be inclined to say, "In New

England we hospitalize our mental patients, and in the Southeast you let them run wild." The truth may perhaps be somewhere between these two extremes of opinion. Certainly from many studies we know that the complexities of social life in the big city are such that the emotional frustrations are more likely to occur: but we know furthermore that the milder forms of mental disorder are more in need of hospitalization in the urban centers than in the rural sections. This discrepancy thus gives us reasons to believe that all the psychotics in need of treatment are not institutionalized and that if American life continues its trend toward greater urbanization and industrialization the relative number of institutionalized psychiatric patients will increase. This viewpoint is further brought out by the facts of previous census taking. If we compare the percentages of institutionalized mental cases in 1800, when 41,000 individuals were institutionalized, with 1910, when 188,000 were institutionalized, with 1937, when 480,000 were institutionalized, we find that our insane population is increasing at many times the rate of our normal population. Many alarmists have taken these figures and used them as an indicator that insanity is on the increase in the modern world. As the tempo of modern civilized life increases undoubtedly there are more opportunities for the average individual to meet the frustrations that lead to mental breaks. There are many reasons for believing, however, that the increase in hospitalization is not primarily caused by this. Deutsch points out that:

> The concept of "insanity" has widened considerably in scope during the past half century; mental disease is more readily recognized. Mental hospitals have increased rapidly in number, have expanded in size, and have become more accessible to the community. Experience has shown that the rate of increase in the number of patients tends to follow the increase in hospital accommodation and the proximity of the hospital to the community served. Federal statistics show that the incidence of mental disease in Massachusetts and New York is about 450 per 100,000 of the general population, while in Alabama, Tennessee, and Mississippi it is under 175 per 100,000. Does this indicate that the former states have more than twice as many mentally ill persons than the latter? Not at all. The explanation is to be found partly, if not entirely, in the wide difference in hospital facilities for the mentally ill.
>
> As mental hospitals have improved and education has gradually diminished vague fears, superstitions, and suspicions on the part of the public toward "crazy houses," the mentally ill are more readily committed to

hospitals by their friends and relatives. In other words, increased public confidence in state hospitals has been a factor in the increase of patients.

A steady improvement in standards of hospital accommodation and treatment has prolonged the average length of hospital life of patients, resulting in a progressive accumulation of the latter.

A most important factor has been the prolongation of the average span of life in the general population. Thanks to the great advances in medical science, sanitation, and hygiene, the expectancy of life has been raised from forty to nearly sixty years in the past half century. Larger numbers of people are growing into old age. As a consequence, a larger proportion of the population is becoming susceptible to those mental diseases that are associated with maturity and senility. About 20 per cent of patients admitted to mental hospitals suffer from the two major psychoses of advanced age, senile psychosis and psychosis with cerebral arteriosclerosis. [From Albert Deutsch, *The Mentally Ill in America*, Doubleday, Doran & Company, Inc., New York, 1937, pp. 487–488.]

This viewpoint is also accepted by Landis and Page, who have recently made a careful statistical study of mental disease. Such statistical studies apply only to the more severe mental illnesses. Whether or not industrialization and urbanization have increased the milder disorders is a moot question. That frustration of basic urges is more frequent and severe in an industrialized urban community than in a rural one is undoubtedly true. Counterbalancing this is the increase in the knowledge of psychological principles which work toward mental hygiene. Psychiatrists do not think there is justification for undue alarm about the increase in the milder forms of mental disorder.

It is possible to get two types of statistics on hospitalized patients. We have referred to the number at any time on the books of the hospitals. This type of statistics is misleading particularly with regard to the incidence of various types of mental disease and the various types of prognosis in them. For instance, the average time of hospitalization in schizophrenia is more than sixteen years, while that of manic-depressive psychosis is five and one-half years. Consequently, the relative number of individuals who develop schizophrenia in any given period is much lower than the relative number of schizophrenic patients who are hospitalized at any given time. To overcome this difficulty in statistics relating to the census of patients at any given time, we have statistics regarding the admission

TABLE 6.—FIRST ADMISSIONS TO HOSPITALS FOR MENTAL DISEASE, BY CLASS OF INSTITUTION AND PSYCHOSIS, 1936

Psychosis	Number					Per cent distribution				
	Total	State	County and city	U.S. veterans'	Private	Total	State	County and city	U.S. veterans'	Private
Grand total	109,076	76,309	10,990	3,565	18,212	100.0	100 0	100.0	100.0	100.0
Total with psychosis	91,334	68,257	7,183	2,621	13,273	83 7	89.4	65.4	73.5	72.9
General paresis	7,561	6,143	567	481	370	6.9	8 1	5.2	13 5	2.0
With other forms of syphilis of the C.N.S.	1,487	1,105	136	140	106	1.4	1 4	1.2	3.9	0.6
With epidemic encephalitis	312	221	29	18	44	0.3	0 3	0.3	0.5	0.2
With other infectious diseases	583	455	29	24	75	0.5	0.6	0.3	0 7	0.4
Alcoholic	5,281	3,516	513	287	965	4 8	4.6	4 7	8.1	5.3
Due to drugs and other exogenous poisons	648	342	43	17	246	0 6	0 4	0 4	0 5	1.4
Traumatic	600	430	48	34	88	0.6	0 6	0.4	1.0	0.5
With cerebral arteriosclerosis	10,954	9,557	529	98	770	10.0	12.5	4.8	2 7	4.2
With other disturbances of circulation	750	486	130	22	112	0.7	0.6	1.2	0.6	0.6
With *convulsive disorders*	1,971	1,705	119	67	80	1.8	2.2	1.1	1.9	0.4
Senile	8,597	6,564	986	33	1,014	7.9	8.6	9.0	0.9	5.6
Involutional psychoses	3,148	2,121	212	9	806	2 9	2.8	1.9	0.3	4.4
Due to other metabolic, etc., diseases	1,634	1,246	140	10	238	1.5	1.6	1.3	0.3	1.3
Due to new growth	175	127	16	7	25	0.2	0.2	0 1	0.2	0.1
With organic changes of the nervous system	928	684	71	49	124	0.9	0 9	0.6	1.4	0.7
Psychoneuroses	3,920	2,040	510	154	1,216	3.6	2.7	4.6	4.3	6.7
Manic-depressive	12,775	9,068	837	209	2,661	11 7	11.9	7.6	5.9	14.6
Dementia praecox (schizophrenia)	19,839	15,370	1,428	556	2,485	18 2	20.1	13.0	15.6	13.6
Paranoia and paranoid conditions	1,887	1,167	167	97	456	1.7	1.5	1.5	2.7	2.5
With psychopathic personality	1,087	808	58	31	190	1.0	1.1	0.5	0.9	1.0
With mental deficiency	3,244	2,728	303	70	143	3.0	3.6	2.8	2.0	0.8
Undiagnosed psychoses	3,953	2,374	312	208	1,059	3 6	3 1	2.8	5.8	5.8
Total without psychosis	17,742	8,052	3,807	944	4,939	16.3	10.6	34.6	26.5	27.1
Epilepsy	668	284	238	39	107	0.6	0.4	2.2	1.1	0.6
Mental deficiency	1,426	1,181	117	64	64	1.3	1.5	1.1	1.8	0.4
Alcoholism	7,848	3,950	799	223	2,876	7.2	5.2	7.3	6.3	15.8
Drug addiction	934	390	75	32	437	0.9	0.5	0.7	0.9	2.4
Personality disorders due to epidemic encephalitis	113	64	24	13	12	0.1	0.1	0.2	0.4	0.1
Psychopathic personality	738	432	43	112	151	0.7	0.6	0.4	3.1	0.8
Primary behavior disorders	301	201	31	28	41	0.3	0.3	0.3	0.8	0.2
Unclassified without psychosis	5,714	1,550	2,480	433	1,251	5.2	2.0	22.6	12.1	6.9

of new patients. These are given in Table 6. Thus we see that in the year 1936 about 110,000 individual Americans were hospitalized for the first time. From knowledge of these figures and those of the total population and life expectancies statisticians are then able to estimate the expectancy of developing a major mental disease. The probability that any given individual will at one time in his life be admitted to a hospital for a mental disorder is approximately 5 in 100. The adequacy of this type of statistical juggling is perhaps to be questioned because we cannot definitely say that 5 out of any given 100 people will be hospitalized for a mental break, but it gives us some idea of the magnitude of the problem of psychosis. As near as we can judge, then, 1 in every 20 persons becomes at some time in his life legally insane. Thus, in a college class of 100 individuals, the chances are that 5 of them will at some time in their lives be hospitalized for a mental disease. Some psychiatrists, taking into consideration the fact that all the individuals who need hospitalization for mental disorder do not receive it, have estimated that 1 out of 10 individuals suffers a *major* mental disease in his lifetime.

The census figures cover only the most severe forms of mental disorder, or what one might call the mental equivalents of tuberculosis and cancer. Among these figures we notice that less than 4 per cent are diagnosed as psychoneurotic. The psychoneuroses, we shall see, are the psychiatric equivalents of the common colds, sore throats, and stomach upsets of internal medical practice. It is only rarely that we have to go to the hospital for a common cold, and it is only rarely that a psychoneurotic individual needs hospitalization. There is no way to get accurate statistics on the number of individuals who at some time suffer a psychoneurosis. Best medical opinion seems to be, however, that a very large number of individuals suffer psychoneurosis in one or another of its manifestations. In fact, modern psychiatric opinion considers an individual who never has some mild mental morbidity as rare as the individual who never catches cold. Some psychiatrists estimate that the average individual should and could—although he does not—profitably consult a psychiatrist about six times a year. The problem of psychoneurosis, however, is really more severe than the problem of the ordinary cold, because it is usually of much longer duration. Many individuals, of course, go through life with a not quite properly functioning stomach or a not quite properly functioning circulatory

system. There is every reason for believing that at least an equal number of individuals go through life with some similar improper functioning of one of the basic emotions.

The problems of psychosis and psychoneurosis are only a small part of the problems with which psychiatry should and theoretically does deal in practice. We have seen that psychiatrists are also concerned with the problems of sexual disorders, in which it is almost impossible to get accurate statistics but with which it has been estimated that at least 10 per cent of the population are in some way afflicted. Furthermore, psychiatry deals with problems of behavior disorders where the underlying dynamics of the disorder are also emotional but where the symptoms occur as antisocial acts rather than irrational beliefs. Most, if not all, criminal acts scientifically belong to the field of psychiatry, although the psychiatrist realizes the magnitude of the legal problems here involved. When these other problems which have recently been recognized as psychiatric are added to the psychoses and psychoneuroses it is easy to see that probably everyone needs psychiatric care at some time or other in his life.

The average individual who needs psychiatric care does not get it, however. Most psychotics, to be sure, at the present time see psychiatrists. But all too often they see them simply for a diagnosis and later for institutional confinement. A few enlightened psychoneurotics also eventually find their way into the hands of a specialist in psychiatric treatment. The vast majority of psychoneurotics never receive adequate treatment. When we come to the sexually perverse and the characterologically defective we find that only very rarely are psychiatric therapies applied. The adequate spread of psychiatry is hindered because adequately trained physicians are very few, and psychotherapy, compared with other medical treatments, is long and expensive. It is outside the limits of this book to recommend what can be done about these difficulties. As time goes on, undoubtedly more thoroughly trained psychiatrists will be available and more general practitioners will receive some training in psychiatry. But the time when adequate psychiatric treatment will be available to the average man is certainly far away. The chief hope seems to be from the side of prevention rather than from the side of therapy. The problem of adequate preventive measures is so intimately connected with the problems of sociology and the nature

of the social order that many believe its final solution may have to wait upon some radical reorganization of society.

3. Nosology and Diagnosis

Like any medical specialty, psychiatry is concerned with two great problems; that of diagnosis and that of treatment. The science of diagnosis includes, of course, finding out how the individual's symptoms and complaints are related to his total life history and discovering the chief etiological or causative factors behind them. Treatment consists of those measures undertaken to ameliorate the individual's complaints and to return him to useful activity. Psychiatric diagnosis consists ideally of finding out all that we can about the individual's body, nervous system, emotions, and mind. The competent psychiatrist will wish to know first in the greatest detail what the patient's physical condition is and consequently will either perform himself or ask a colleague to make a thorough physical examination. He will wish to know all that he can about the patient's nervous system and in this connection he must himself make or have a colleague make a thorough neurological examination. He will wish further to know all that he can about the patient's psychological make-up, his intelligence quotient, and his social attitudes. In this connection he may well call upon a psychologist. With these data and the data of the life history, which must include social history and educational history and medical history, he attempts to evaluate the various aspects of the patient's personality so that he can decide what method of treatment will be most successful in readjusting the patient to the social reality.

This material is all gathered together in a case history or anamnesis. There is no definite set of rules for making such a case history. Certainly to be included are the following items:

1. Historical data.

   a. Familial history giving structure of the familial situation.
   b. Developmental history giving childhood and school history.
   c. Vocational history giving positions held, successes obtained, reasons for leaving or changing, etc.
   d. Medical history, giving all diseases and their treatment, and outcome.
   e. Social history, including friendships, sexual attachments, marriage.

f. History of present illness, giving patient's ideas of early symptoms, his ideas on etiology, etc.

The history so gained should be from the patient so far as possible, but should be checked and enlarged on by interviews with friends and relatives.

2. Examinational data. (These should include all the positive findings of most varied physical, neurological, pathological, psychiatric, and psychological examinations.)

3. Specific psychiatric or psychoanalytic data. (These should include the results of interviews with the psychiatrist concerning the patient's problem in connection with his emotional life, early traumata, and present life situation.)

4. Diagnosis. (This should include medical, characterological, psychiatric, symptomatic and social diagnoses so far as these are indicated.)[1]

Such a case study to be adequate requires that the psychiatrist spend many hours in interviewing the patient and have the assistance of internists, neurologists, pathologists, and psychologists, although, of course, he may function in each of these respects himself.

We see that the case history ends with a descriptive psychiatric diagnosis. The descriptive psychiatric diagnosis is a label for the *syndrome*, by which we mean the way in which the various symptoms hang together in a more or less strictly demarcated disease entity. The problem of descriptive diagnosis in itself is a separate branch of medicine called "nosology." While it is realized that no two cases are exactly alike, it has been the experience of medical men that certain sets of symptoms hang together and by abstraction one can speak of definite disease entities. For some of these disease entities we know certain facts concerning their etiology or causation and their prognosis or probable course. For the various disease entities the precision of our knowledge, of course, varies. For some, such as neurosyphilis, we know the precise cause, the general course, the indicated therapy, and the probable outcome. In such cases the

[1] Here I have indicated in general the case-history procedure followed at the Menninger Clinic. Drs. Karl and William Menninger will soon publish a work in which the detail of this case-history procedure will be given. Other good outlines for case-history taking are to be found in Pressey and Pressey, Cheney, and Brown and Potter.

descriptive diagnosis is, of course, of the greatest importance not only in suggesting what shall be instituted as treatment but also in facilitating the course of the treatment and for informing the friends and relatives of the patients as to the probable outcome. For other diseases, such as schizophrenia, we have only rather vague conceptions as to the etiological factors, rather unprecise ideas as to what should be undertaken in the way of therapy, and can discuss prognosis only in the terms of statistical probabilities. For other diseases we know sometimes something more about the etiology and less about the prognosis or sometimes little about the etiology and a great deal about the prognosis.

Descriptive psychiatry, then, attempts to order the variegated symptoms which we find in psychiatric practice to certain disease entities or syndromes. It is an essential part of psychiatric practice because only by giving these diseases names is it possible to talk about them. In the following chapters we shall be concerned with giving the descriptive psychiatry for the outstanding disease entities with which psychiatry deals. We shall not have space to discuss all the various syndromes, so we shall choose those which are most frequent and most important or those which particularly illustrate certain of the points brought out in our discussions of theory. In connection with those diseases which we do discuss in some detail we shall mention other related forms and give reference to more complete studies of them. In presenting the various syndromes we shall follow the following outline.

1. Name of disease and history of its differentiation.

(This will include the relationship of the name to the basic symptomatology and something of the history of the disease, because by studying the history we can better understand the relationship between the disease and the theory of the disease.)

2. Incidence.

(This will include statistics regarding the number of individuals at present hospitalized for the disease and the new admission rate. These two types of statistics will give us some insight into the incidence of the disease and its frequency.)

3. Symptomatology. It is necessary to divide the symptomatology into several periods because mental disease is a process of readjustment or reequilibration of the personality structure in resolving conflicts. Many of the older texts simply list the symptoms of the acute manifestation of the disease and so give a very

false picture. In many cases the acute symptomatology occupies only a relatively small period in the disease process.

a. Prodromal period.

(Here we shall discuss the onset of the disease, giving a picture of the premorbid character of the individual and the factors which help in the early detection of the disease.)

b. Acute and chronic periods.

(This will include the symptomatology for the course of the disease as it is ordinarily run, that is, the symptoms which normally develop in the course of the sickness.)

c. Recovery period.

(This includes the signs of recovery and the course of recovery and will also include something of the prognosis.)

d. Symptomatology of the subforms.

(Many of the diseases with which we shall deal have differentiable subforms, where the underlying dynamic picture is the same but where the surface symptoms assume quite different forms.)

4. Differential diagnosis.

(Here we shall discuss the criteria by which we may differentiate the disease in question from other diseases whose symptoms are very much like it or even sometimes identical. In some cases we shall see that this is easy; in others, impossible.)

5. Etiology.

a. The organic etiological factors.

(Here we shall discuss what we know about the physiological aspects of this problem and the various theories which are based primarily on organic factors or internal medicine.)

b. The psychological etiological factors.

(Here we shall discuss what we know about the psychological aspects of this problem and the various theories which are based primarily on psychological factors.)

6. Therapy.

(Here we shall discuss the various suggested and attempted forms of treatment for the amelioration of the symptoms and evaluate them.)

Our discussions of differential diagnosis, etiology, and therapy are by no means intended to give instruction in medical practice but are included only in that they nicely elucidate certain points of theory. Instruction in medical practice may only be had in the medical schools.

The problem of nosology is concerned not only with the problem of differentiating the various disease entities and syndromes, but in showing how they are related to each other. In other words, there have been proposed a whole series of nosological schemata for relating the various diseases to one another. The most usual one is on the basis of symptom relationships, that is, in terms of a more or less phenotypical classification. This was the procedure of nineteenth-century descriptive psychiatry and is still followed by many psychiatrists. Another popular method is that of a genotypical classification on the basis of etiological factors. The diseases are classified according to whether they are caused primarily by organic factors or primarily by factors of psychological adaptation. This method has advantages too for some problems, but since we have seen that every behavior problem offers both organic and functional aspects it cannot be fully consistent. Another method of nosology based on underlying genotypes is that suggested by the psychoanalytic psychiatry. Psychoanalysis, as we have seen, considers mental disorder to be caused by some inharmonious balance between the basic drives and the forces of the ego, superego, and id. It further believes that there may be regression of the basic drives. This psychoanalytical nosology schema seems the most logical and most systematic of any yet devised; however, it is not yet generally accepted in medical practice. So that the reader is not too confused by these various methods, we shall attempt our own nosological classification on the basis of three planes. We shall begin by distinguishing general types of personality restructurization such as psychosis, psychoneurosis, sexual perversion, character disorder, and genius. To each of these we shall devote one or more chapters. This division is based on the psychoanalytic mode of thinking. Then we shall differentiate within each of these groups the primarily functional and the primarily organic diseases. This is the method suggested by the average orthodox psychiatrist. In doing this we shall take care, however, to point out the unquestionable presence of psychological factors in the primarily physiological categories and vice versa. These divisions established, we shall deal with the individual diseases on the basis of the similarity of the symptoms. In other words, our classifactory scheme attempts to combine the advantages of orthodox psychiatry and of modern psychodynamic theory.

4. Psychoanalysis

From the standpoint of modern psychiatric theory, therapy must be undertaken along the most varied lines. Since every problem with which the psychiatrist has to deal is at the same time a medical and a psychological problem, it is obvious that both the medical and the psychological sides must receive adequate attention. The medical therapy is of the sort undertaken by internal medicine in general, but with particular psychiatric applications. We shall not have much time to spend upon it in a book primarily devoted to psychology. It must be pointed out, however, that the treatment of any patient as a psychosomatic unit requires a certain amount of medical treatment. This is sometimes further complicated by the fact that the psychological reaction tendencies in mental disease lead to modes of life which bring about physical complications. Thus the tendency of some psychotics to withdraw from social reality leads them to a mode of life where they may follow an improper diet and where they may become sluggish through lack of exercise. Similarly, in psychological depressions there is a general slowing down of bodily metabolism so that medication of a stimulating sort is indicated. In manic excitations we have naturally an exact reversal of this picture; in these cases it is necessary to slow down the ensuing physiological bodily processes. Thus medical treatment of a sedative sort is indicated.

In the cases of the so-called "organic sicknesses," medicinal and physical measures may be of primary importance. Thus today nearly everyone has heard of the fever treatment for neurosyphilis. Detailed discussion of such specific organic therapies is outside the range of this book. In connection with the various diseases we shall indicate briefly the nature of at least the most important of these.

In this section we can concern ourselves only with outlining the most important psychotherapies because these are the most useful modalities in most psychiatric cases and the methods of treatment especially developed by psychology. We shall be concerned primarily with the chief methods of psychotherapy, that is, the treatment of the mentally ill individual through psychological interviews of one sort or another, and with milieu therapy, which attempts amelioration of the individual's condition through changing his immediate environment.

We have discussed Freudian psychoanalysis as the most systematic and logically developed theory of personality genesis and of the nature of the various personality disorders. It is also the most effective form of psychotherapy for many of the diseases and may be said to have its value as a therapeutical instrument in practically all the diseases. Psychoanalysis attempts a real restructurization of the personality of the individual by treating him so that the repressed experiences may be readmitted into consciousness and the cause for the conflict and ensuing symptom development removed. The procedure, in brief, allows the individual to relive those experiences of early infancy in such a way that their real value rather than their imagined emotional value is perceived. It brings the patient gradually to knowledge of all the past emotional experiences which have been incorrectly interpreted and allows him to see his past in light of the reality principle, when it was lived in the light of the pleasure principle. Since psychoanalysis aims at a thoroughgoing reorganization of a personality which took years to establish it is in itself a long and difficult process. Just as the personality is not made in a day, so the personality cannot be remade in a day. Depending on the age of the patient, his intellectual capacity, the severity of his psychological disturbance, and the amount of restructurization of the personality which is necessary for him to make a proper adjustment, psychoanalysis covers a period of from several months to several years, rarely less than nine months. During this period the individual has daily interviews with his psychoanalyst. He should not undertake any great change in his social status during his analysis, as such changes alone may complicate the personality picture.

The psychoanalytic interview or "hour," as it is technically called, is based on several technical procedures, the nature of which we may only touch upon here. The psychoanalyst, as we have seen, is a person particularly trained in the details of Freudian psychological theory and in the interpretation of symptoms in line with such theory. From a very few interviews he can gain a pretty good picture of how the present symptoms of the patient must be related to certain types of past experience. Symptomatic cures, *i.e.*, cures where the individual symptoms are removed, are relatively easy, but they alone do not in any way guarantee that a new symptomatology will not develop based on the conflicts not yet resolved in the individual. Consequently it is the duty of the psycho-

analyst not only to analyze the conflict of the individual in his own consciousness but also to bring the individual to the place where he himself relives the most important emotional traumatic experiences. In order to relive the most important emotional traumatic experiences, it is necessary for the patient to relive a great many more trivial experiences which either border on the important ones or in some way connect these. This is a long and laborious process requiring a great deal of skill on the part of the analyst and requiring patience, intellectual honesty, and a real desire to get well on the part of the patient.

After a few preliminary interviews, in which the analyst allows the patient to reconstruct his life history insofar as he is able in terms of the immediate consciousness, psychoanalysis proper may be said to begin. In the analysis proper the patient assumes as relaxed as possible a condition, usually through reclining on a couch in a quiet and semidarkened room out of view of the analyst, and tells the analyst everything which comes into his mind. This is the so-called "method of free association." The principle on which it is based is the idea that unconscious material has certain associative bonds with conscious material and, in allowing the freest possible association, much relevant material from the unconscious will come into the field of consciousness. Theoretically, the unconscious material which may not be faced by the person in ordinary life may be while in analysis, because of the *transference.* We shall speak of this shortly. Soon in the course of free association arises what is known as *resistance.* One can best gain the idea of what resistance consists in by attempting to associate freely and by asking himself which of the thoughts he would not care to tell anyone. The individual who does this soon sees that he has thoughts which he finds difficult to face. In the analyses the individual has incentives to impart this very private and unpleasant information to another individual which tend to overcome this resistance. In doing this not only does he become able to face it himself but he has to verbalize it, which is perhaps of even greater importance. As Dr. Harry Stack Sullivan has pointed out, those things which we really know to the extent that we can accurately describe them are things in which the emotional components are at a minimum. We have repeatedly pointed out that the emotions are the fathers of both thoughts and acts. But the stronger the emotional components in our behavior, the less rational the thoughts and the less realistic the

acts. Consequently the process of free association soon becomes the process of describing emotional traumatic experiences so precisely that another individual will understand them. Usually when they are so described the patient himself will gain the insight required to face the facts. The free associations to begin with are usually full of irrelevant material connected only in a very inchoate fashion, but gradually the ability develops to express the essential experiences concisely and coherently. When the individual relives the early experiences in terms of his adult personality the true value and significance of these experiences is realized. He may thus accept in consciousness the facts of his early emotional experiences, and the necessity for repressing them is lessened or removed. The older psychoanalytic viewpoint was that the consciousness of previously repressed emotional experiences in itself removed symptoms. Psychoanalysis was called a "mental surgery." This it certainly is not. During the analysis, and perhaps to even a greater extent in the time following it, the patient gradually comes to knowledge of his underlying emotional conflicts and needs. The energy bound to symptoms is gradually freed for more constructive activities. The ego increases its power to make adaptive compromises between the emotional drives of the id and physical and social reality. Personality problems arise, as we have seen, when the ego is no longer able to subjugate the id, that is, when unconscious id forces break through as symptoms or when the ego is in conflict with the superego. Freud has expressed the purpose of psychoanalysis very eloquently as follows:

> The purpose of psychoanalysis is to strengthen the ego, to make it more independent of the superego, to enlarge the ego's field of perception, and to strengthen its organization so that it can appropriate new segments of the id. Where there is id, there shall be ego. [S. Freud, *New Introductory Lectures on Psychoanalysis*, W. W. Norton & Company, Inc., New York, 1933.]

Besides the technique of free association, the analysis is expedited by having the patient remember and account for and gradually interpret the symbolic meaning of his own dreams. In the theoretical section of this book we saw that the dream represented a mechanism in which unconscious and usually repressed material gained entrance to consciousness in disguised form. There we gave several dreams with their interpretation. Since the dream always represents the

attempted resolution of some strong emotional conflict, the interpretation of dreams helps both the analyst and the patient to get at the most important unconscious material. Dreams are not analyzed by any particular symbolic code, but are seen to be meaningful when one knows the past history of the patient, his present real situation, and his free associations to the details of the dream. Then, using what is known of dream symbolism in general, the analyst is able to make interpretations. The technique of psychoanalytic dream interpretation is one which in itself requires detailed training.

It is difficult for the student to see just what role the psychoanalyst plays in this procedure. Why, he may ask, cannot any individual read the important theoretical treatises on the subject and analyze himself? There are two chief reasons why this is impossible. In the first place, since the symptoms in the individual represent compromises of an economical sort by which the real conflictual situation is controlled, it should be easy to see that the individual's own immediate interpretations would probably be compromised likewise. This is particularly true of the neurotic personality. The well-adjusted normal person with a knowledge of psychoanalysis can go some way toward a self-analysis, but with a neurotic or a characterologically defective person this is almost impossible. The symptoms only develop as masks to cover the real conflict and very often the individual could not face the real conflict and go on living. The personality, as we have seen throughout this work, is very complex and the ego of the sick individual would probably misconstrue the meanings of symptoms even if he started a self-analysis with a good intellectual and theoretical background. In actual practice it is found better to have the patient completely ignorant of the theory at first because very often when there is a choice of possible explanations the patient will choose the wrong one because by so doing he can cover up the nature of the conflict.

The second reason why self-analysis is impossible is a more important one. The ego itself in the sick individual is not strong enough to face reality. It becomes strong enough to face reality only in the psychoanalytic situation with the help of the analyst. In the analytic situation develops the phenomenon known as *transference*. Transference refers in general to the emotional relationship which develops between the analyst and the person undergoing analysis. It is meaningful to speak of the transference of any two individuals who are engaged in any social intercourse. In such a

situation there are libidinal or hostile relationships established at once. The psychoanalyst is trained to make the most of the patient's emotional reactions toward him from the first. The patient becomes emotionally involved with the analyst and the analyst attempts to view the patient with the minimal amount of emotion. The analyst must appear psychologically strong, very just, and very understanding of human frailty. He becomes immediately a surrogate for one of the real parents. Thus he becomes the parent or father confessor to whom everything may really be told without fear of punishment or recrimination, the father who will understand and show no amazement or emotional resentment at even the usually most unspeakable emotional facts. According to the psychoanalysts, it is through this confidential relationship with the analyst that the patient strengthens his ego to the extent that he can consciously face the id impulses. The analyst in this situation always allies himself with the forces of the individual's ego and with the forces of reality, not by showing indifference to the emotional id impulses but by showing the patient that they are not really so terrible and that they may be emotionally desensitized.

The libidinal relationship between the patient and analyst is called "positive transference." In it the patient finds a person whom he can love and tell about his loves. We have seen, however, that according to Freudian theory everyone has aggressive or hostile impulses of equal importance with libidinal impulses. The individual in his childhood entertained libidinal and hostile impulses toward his parents and soon comes to entertain hostile as well as libidinal impulses toward the analyst. This is what we call "negative transference" and is of as great value as positive transference. The reason for this is that the individual finds he can also hate his analyst and express his unconscious hates and aggressions to him.

The process of psychoanalysis, then, is one in which the individual finds a father confessor who teaches him gradually to face reality and helps him to restructure his personality so that this is possible. It is at the same time a medical and an educational procedure and like all educational procedures takes a long time. Finally the personality is so structured that the individual can face reality alone without the psychoanalyst and the patient breaks the transference. In this time he has restructured his personality and he has done this himself (with the help of the analyst) so that he has learned both to

love and to hate more wisely and has learned to control these basic urges in accordance with the reality of the social order.

From our discussion of the procedure of psychoanalysis we can easily deduce the type of individual to whom it is suited and point out that while it is valuable as a research tool in other types of disorder it cannot always be successfully applied to them. In the first place, it is regrettably true that psychoanalysis is a very expensive procedure. The analyst is a very highly trained specialist who can have as a practice only five or six individuals at a given time and consequently must charge relatively large fees. Furthermore, there are relatively few properly qualified analysts at the present time. The economic necessities of the physician, the limited number of patients whom he can handle, all lead to the situation that an analysis is beyond the reach of the man of average income. The minimum cost of an analysis may be estimated at about $2,000. This difficulty of analysis will gradually be overcome through the training of more psychiatrists in analytic procedures and possibly through the establishment of psychoanalytic clinics or foundations where either private or public funds are made available for the less well economically situated patient.[1]

Since the psychoanalysis requires more or less the reliving of the whole past life, particularly the experiences of early childhood, it is easy to see that the age of the patient is another important prerequisite. In older people the complete reliving of the past is in itself so time-consuming that neither the individual nor the analyst can well afford it. Furthermore, with approaching senility the potentiality of redirecting libidinal and aggressive forces becomes increasingly diminished. The older individual is already so near the end of life that even with a reconstructed personality life has not much to offer him. Consequently, we may say that a second prerequisite to a successful psychoanalysis is youth. It is well known of course that psychological, physiological, and even anatomical age does not exactly correspond to chronological age. For this reason no definite chronological age limit may be given. The best prospects are, however, usually men under forty-five and women under forty (because of the earlier psychological and physio-

[1] The various psychoanalytic institutes and clinics in New York, Chicago, Washington, Baltimore, Boston, and Topeka all take some research cases on a minimal fee basis.

logical maturation of the female), and psychoanalysis is scarcely ever indicated in either sex after fifty.

The severity of the sickness is another factor which must be taken into consideration in recommending psychoanalysis. Since it is necessary for the individual to enter into the transference situation with the analyst, those individuals suffering from such a severe libidinal regression that the libido is completely directed inwardly in a narcissistic fashion cannot be treated. The most outstanding examples of such cases are, of course, the schizophrenics, and, since schizophrenia is the most important single problem in psychosis, this means a severe limitation of the applicability of psychoanalysis. Similarly the other great functional psychosis, the manic-depressive, does not permit psychoanalysis in either of its extreme fluctuations. The manic individual is too excited to cooperate adequately in the free associative process, the depressive is too burdened with a self-punitive superego. When one adds to the functional psychoses the organic psychoses, where there is a real destruction of brain tissue, one sees that psychoanalysis is not applicable at all to the most severe of the mental disorders. Psychoanalysis undoubtedly has a great deal to offer for the study of the psychoses, and, as a matter of fact, it is through psychoanalysis that we have gained most of our knowledge of the meaning of psychotic symptoms. Along this line the chief value of psychoanalysis will be in the establishment of more adequate rules of mental hygiene, which it may be hoped will greatly lessen the incidence of these severe diseases.

In fact, the real value of psychoanalysis lies much more in its importance as a research method than as a therapeutic device at the present time. Dr. Franz Alexander has pointed out that, of all the methods which we have of studying deep-lying psychological factors, it is by far the most fruitful. He shows in detail how psychoanalysis overcomes the sources of error of unaided psychological observation. A psychologist may ask an individual why he does a certain thing. In interpreting his answer, there are four great sources of error. In the first place, the individual may not want to answer truthfully. In the second place, he may not know the true cause of his behavior himself. In the third place, the psychologist may not understand him or his language. In the fourth place, certain psychological blind spots in the analyst himself may prevent his correct interpretation. Psychoanalysts have an advantage here which at least partially avoids

these possible sources of error. A sick individual comes himself for help and thus tells the truth. In the course of the free association the true cause of his behavior comes out. So the objection that the subject himself does not know is overcome. The length of the analysis overcomes mutual misunderstanding, and, since the analyst himself is analyzed, his own psychological blind spots are overcome. However, if psychoanalysis is not indicated as the only therapy for the psychoses, even at the present time psychoanalytic principles may be wisely used in connection with the general treatment. It is in this way that they are more and more being utilized by orthodox psychiatrists in the management of institutionalized patients.[1]

The value of psychoanalysis for the various diseases will be discussed in connection with each of them. In summary let us say that psychoanalysis is a costly, lengthy therapy definitely indicated for but few of the whole list of psychological problems and actually specific to only one or two of them. These limitations, however, are not of such great importance if one believes that the chief value of psychoanalysis at the present time is as a research tool rather than as a definite therapy. For those cases for which it is applicable, psychoanalysis is the outstanding therapy in that we have reasons for believing it really reconstructs the personality and brings about a dynamic rather than a merely symptomatic cure. It is to be hoped in the near future that funds will be made available so that psychoanalysis may be more widely practiced on research problems in the fields of psychiatry, psychology, and sociology.

5. Other Forms of Psychotherapy

Although psychoanalysis is probably the only therapy we now have which effects a real dynamic cure, symptomatic cures are to be accomplished for many of the neurotic symptoms and even some of the psychotic ones. In Chap. IV we have already pointed out the difference between a dynamic and a symptomatic cure. In a dynamic cure the underlying structure is so reconstructed that the necessity for the symptom disappears. Dynamic cures all through the field of medicine may be said to be cures in which the symptom disappears and does not return unless the same internal dynamic situation arises again. Probably the most striking dynamic cures

[1] *Cf.* Wm. Menninger's papers on psychoanalytic therapies (1936*a*,*b*,*d*) and Ives Hendrick, Lawrence Kubie, and Flanders Dunbar (1939).

throughout the field of medicine are those furnished by surgery, bacteriology, and immunology. Appendicitis and tonsillitis are dynamically cured by appendectomy and tonsillectomy. Syphilis is dynamically cured by the treatment with arsenical compounds. Typhoid fever is prevented, if it has not occurred, by vaccination and is much diminished in its severity by vaccination after it has started. Similarly in the field of psychological medicine, conversion hysteria is subject to dynamic cure by psychoanalysis. But dynamic cures are not the only things which physicians do to ameliorate the sufferings of mankind. The treatment of sore throats by gargling, the treatment of constipation by laxatives, the treatment of hay fever by various inhalants, bring about what may be called the "symptomatic cures." The patient's suffering is lessened, his condition is ameliorated, but nothing in the underlying dynamics is changed. There are many forms of psychotherapy which bring about symptomatic cures. One cannot make too sharp a division between symptomatic and dynamic because the two methods of cure merge into each other. In some cases where complete psychoanalysis is impossible, psychoanalytically oriented therapy does much to help the condition. By psychoanalytically oriented therapy is meant simply an attenuated form of analysis where the analyst makes more of active suggestion and makes more interpretations of the symptoms to the patient without necessarily taking the time to bring the unconscious material into the patient's mind. A psychoanalytic form of psychotherapy is indicated in all those cases where if other factors permitted psychoanalysis would be undertaken. Usually through it one can lessen the symptoms or change them into symptoms which are less incapacitating to the individual in his social environment. Psychoanalytical psychotherapy may also be undertaken as an adjunct to therapy in the psychoses where complete psychoanalysis is impossible. The efficacy of psychoanalytical psychotherapy is directly proportional to the degree to which the therapy approaches a real psychoanalysis.

Hypnosis represents a still greater shortening of the objectives of psychoanalysis. Every psychiatrist should have some training in hypnosis. It was the therapy originally used by Freud, and it was given up by him only because the cures effected proved to be only symptomatic. Through hypnosis one can quite easily uncover the nature of the conflicting situation but simply uncovering it does not necessarily cure the conflict for the patient. It is still possible, how-

ever, in deep hypnosis to suggest that any given functional symptom will disappear or be ameliorated. It is often possible to influence the neurotic patient to choose some other symptom which will be less disabling to him in his life environment. Hypnosis, then, brings about the type of symptomatic cure for neuroses which aspirin brings about for a headache. It may be necessary to repeat the course of hypnosis just as it is necessary for headache sufferers to keep a supply of aspirin in the house. For many cases, hypnosis can do a great deal to make life more bearable.

There are numerous other forms of psychotherapy. The mere talking one's difficulties over with a sympathetic individual who has the prestige of a psychiatrist helps many patients. Particularly in the field of the milder neuroses and milder forms of sexual maladjustment, the insight which the suggestions of the psychiatrist can give into the patient's difficulty may be very helpful. For many cases, a sort of mild suggestive psychotherapy may be just as effective as hypnosis. The undoubted psychotherapeutic value of the Catholic confessional is understandable in this light. Even the confession of one's difficulties to a friend who is sympathetic and who takes an understanding attitude does a great deal to help the average neurotic. If there is one basic rule which may be laid down for all psychotherapy, it is the rule that symptoms are always helped by being admitted and being faced. A morbid fear or an obsessive thought or a compulsive form of action never appears quite so terrible after the patient has brought himself to tell others about it. The mere telling in unprecise verbalization is consequently somehow related to the reeducation of psychoanalysis. The various forms of psychotherapy may be ordered along a continuum in that they all represent methods through which the underlying dynamic conflict situation is more or less resolved through bringing it into the field of rational consciousness.

There are numerous other psychological therapies which are widely used with mental patients. We have already pointed out that the reeducation of the mentally ill individual often requires sociotherapy. Individuals who have been unable to meet the realities of the social environment can be helped either by being trained to meet them by psychotherapy or by having the environment changed to suit the limitations of their personalities. Thus, the mere institutionalization of the mentally ill individual may be considered as a sociotherapy. He is removed from an environment to whose complexity

he could not adjust into one which is suited to his present personality. Once he is institutionalized, the process of reeducation should begin. With the psychologist's understanding of the personality a schedule may be arranged which allows social readjustment and reeducation along the most varied lines. It is usually necessary and helpful to build up the patient's physical stamina. In this connection hydrotherapy and physiotherapy are sometimes helpful. Very often he may be helped by being taught a hobby, and in this connection we have a fairly well-developed science of occupational therapy. Quite frequently individuals who have isolated or peculiar personalities have never learned how to get along in social affairs, and here it is possible to do a great deal with what has been called a recreational and entertainment therapy. Recently there is developing a realization that many patients may be helped by an interest in reading, and we have the development of bibliotherapy. Not only by giving the patient something to do, but by assigning books which in themselves may have a psychotherapeutic value, this field has undoubtedly great possibilities. All these auxiliary therapies should be administered in such a way as to fit in with the major purposes of the psychotherapy. By so doing, the direct and tangible values of these various therapies will best serve their role as adjunctival therapies to the chief psychotherapy.

6. Reeducation: the Aim of All Psychotherapy

In the broadest meaning of the word, education refers to the process whereby individuals learn to adjust to their social and physical environments. Formal or social education should always be administered to this end—and formal education, as modern theorists all agree, is only a small part of the general educative process. In our section on "The Genesis of Personality," we saw how personality difficulties and disorders arise on the basis of failure of the educative process, *i.e.*, failure to make socially adequate adjustments to a changing environment. Thus, if the cause of personality disorders is to be found in faulty education (particularly emotional education) the cure must be found in emotional reeducation. And as the process of education is a long one, so the process of reeducation is a long one, too. This viewpoint should overcome the natural distrust of the layman of the length of psychotherapeutic treatment. Medical and surgical treatment require only the removal of the disturbing bacteria or growth processes.

Psychotherapy, on the other hand, requires a readjustment to maladjustment of sometimes many years' standing.

Of course, some personality difficulties do arise on the basis of a single act badly learned. For these only a little reeducation is necessary. The vast majority, however, arise slowly in a lifetime. From this the greater efficacy of psychoanalysis compared with the other psychotherapies should be clear. In some ways psychoanalysis is the college education of the psychotherapies. Individuals can learn something about the arts and the sciences from correspondence schools and even from sporadic reading, but this knowledge never becomes integrated and certain. But it is not advisable for all individuals to go to college, and in many cases psychoanalysis is not advisable either. Just as we find finished and cultured individuals without any formal training, so we have individuals so well adjusted that they have no need of any reeducative psychotherapy. From this viewpoint it also follows that the great hope for the future lies in improving the nature of the educative process so that no form of psychotherapeutic readjustment is necessary. Until that time, psychotherapy must continue to educate and train people to get rid of their false beliefs and their vague and unreasoned fears and it must use all the tools at its disposal.

Individuals sometimes recover without any therapy at all and sometimes individuals do not recover under the most varied therapeutical program. We are still quite in the dark as to the reasons for both the automatic recoveries and the failures to respond to treatment in some cases. In psychiatry, with very few exceptions, we have a situation where no therapy is specific to any given disease. We have the further knowledge that in some cases recovery occurs quite independent of any therapy. One of the great problems for future research arises with regard to the efficacy of the various types of therapy and how these are related. It is very difficult to set up critical experiments in this field because the medical man's first duty is to do everything he can and try everything he can to heal the patient. It is hoped that the collaboration of research psychologists and medical men in this field in establishing the science of psychopathology will help us to evaluate the adequacy of the various forms of therapy. We shall return to this problem in our final chapter. After the general considerations of psychiatry which we have given in this chapter we are now ready to proceed to the detailed descriptive symptomatology of the chief psychiatric syndromes. We shall

begin with the psychoses which are recognized as being primarily organic, proceed to the primarily functional psychoses, then to the psychoneuroses, then to the problems of aberrant sexual behavior, and finally to the problems of character disorders and genius. By so doing, we shall gain insight into the systematic aspects of modern psychiatry and learn both its great accomplishments and its many specific shortcomings.

7. Summary

1. The psychiatrist is the medical specialist who deals with the diagnosis and treatment of mental disorders. His training is outlined and the nature of psychiatric practice described. Modern psychiatry deals not only with mental illness in the accepted sense but with behavioral problems, perversion, and genius.

2. Psychiatric problems are much more frequent in the modern world than the layman suspects.

3. Nosology is the science of classification of diseases and diagnosis the science of classifying the disease of the individual. Before psychotherapy may be undertaken, proper nosological classifications must be set up and proper diagnoses made.

4. Psychoanalysis is discussed as a form of therapy. It utilizes free association, dream interpretation, and transference to uncover the unconscious conflicts of the individual and to allow them to be subjected to conscious control.

5. Other forms of psychotherapy which attempt personality restructurization include psychoanalytically oriented psychotherapy, hypnosis, and suggestive psychotherapy.

6. All psychotherapy consists in reeducating the patient to adapt his emotions to social and physical reality.

Bibliographical Note

The training of the psychiatrist is a matter of medical-school curriculum and the catalogues of the various medical schools give this. The specific training and requirements for psychoanalysts are given in Kubie. The best statistics on mental disorders in the United States are those of the Department of Commerce, Bureau of the Census. A. Deutsch (1937) and Landis and Page both give accurate information on statistical problems of American psychiatry. The standard nosological classification that is given is that of the American Psychiatric Association and it is reprinted in Rosanoff. For psychoanalysis as a therapy, see Kubie, Freud (1924*a*, Vol. II), Rank and Ferenczi, Fenichel (1938–1939), Hendrick, Menninger (1937*a*, 1938*a*). The various other forms of psycho-

therapy are discussed in Rosanoff and Bleuler (1924). The following general works on psychiatry are useful: Henry, Strecker and Ebaugh, Bleuler (1924), Rosanoff, Kraepelin (1915), and Bumke (1928–1932). They are listed in the order of their increasing completeness. Besides Freud (1924*a*, Vols. I–III), Fenichel (1934), Schilder (1928), Deutsch (1932), and Rickman (1928) are important for psychoanalytic psychiatry.

CHAPTER XV

THE PSYCHOSES PRIMARILY ORGANIC IN ORIGIN

1. The Concept of Psychosis

By this time the reader will have a fair idea of what is meant by the concept of psychosis and what psychotic behavior is. We must now give a precise definition of the term. Until the last few decades, psychiatry was concerned chiefly with the psychoses and only secondarily with the psychoneuroses and character defects. We have seen that a psychotic individual is usually so obviously mentally ill that he cannot escape detection, but that the neurotic and disordered characters are generally considered "nervous" and "bad," but not sick. Psychotic in general, then, refers to those individuals who are patently "insane." In psychosis, we have a major mental disorder in which so much of the personality is affected that institutionalization is usually required. The psychotic individual also rarely has insight into the pathologic nature of his mental mechanisms. The psychotic individual's behavior is usually so bizarre, his beliefs are so obviously delusional, his emotions are so strikingly disordered that his intimate circle even without any psychiatric knowledge perceives that he is sick.

Through psychoanalytic theory, we are able to set up fairly precise criteria to divide the psychotics from the normals and the other basic behavioral categories. In the first place, rather than balance there is marked lack of balance between ego, superego, id, and reality. The previously repressed id urges break through into actions and beliefs which are incompatible with reality. In psychotic conflicts, the ego allies itself with the id, supports the demands of the id (although these appear in a disguised form), and together with the id denies reality. The id drives break through in a disguised but socially unacceptable form. The superego is also affected. It may disappear or become unduly severe or be projected outward. There is a regression of the libidinal and the aggressive urges to earlier levels and of the ego to a less differentiated stage. Psychotics regress to the early anal level or beyond. The reader will remember that reality testing is established between the early and the late anal stages.

In Table 7 and Fig. 10 we give the descriptive criteria and diagrammatic representation of psychosis. In order to compare the

TABLE 7.—COMPARING THE NORMAL WITH THE PSYCHOTIC PERSONALITY

	Nature of internal conflict	Social nature of resultant behavior	Degree of regression	Relation of basic urges to love object	Resolution of conflict results in
	1	2	3	4	5
Psychosis	Extremely inharmonious balance in ego, superego, id, and outside reality. Ego powerless or weak against id and breaks with reality. Superego projected or taken over by ego or oversevere.	Socially unacceptable behavior in both motor and cognitive spheres. Id impulses break through in a disguised form.	To at least the early anal, thus beyond the level of reality testing. For individual diseases, *cf.* Table 2, p. 206.	Objectless or extremely ambivalent.	Severe symptom formation in cognitive and motor spheres.
Normal	Harmonious balance between ego, superego, id, and outside reality.	Behavior in all spheres constructive and socially acceptable.	None. Genital stage reached.	Postambivalent. Some urges gratified, others sublimated.	No conflict.

personality structure in psychosis with the normal personality, both the table and the illustration of the normal personality are repeated. The actual symptomatology of the psychoses and their derivation from the theoretical constructs will concern us in this and the following chapter.

2. THE ORGANIC FACTOR IN PSYCHOSIS

In Chap. III we saw that, for certain of the mental diseases, psychiatrists have established a definite and specific brain pathology. The establishment of such definite pathologies for certain diseases was the basis for the great hope of the somatogenic school in its early days. The failure of neuropathologists to establish specific organic pathologies for other diseases encouraged the psychogenic viewpoint. Gradually, we have come to realize that all behavior problems

present both psychological and physiological aspects. Certain psychoses, however, allow the demonstration of a specific organic pathology, and, since such demonstration is highly advantageous both for diagnosis and for possible therapy, the medical profession is, of course, much pleased when it is able to give the specific pathology underlying any disease and endeavors to find it for all diseases.

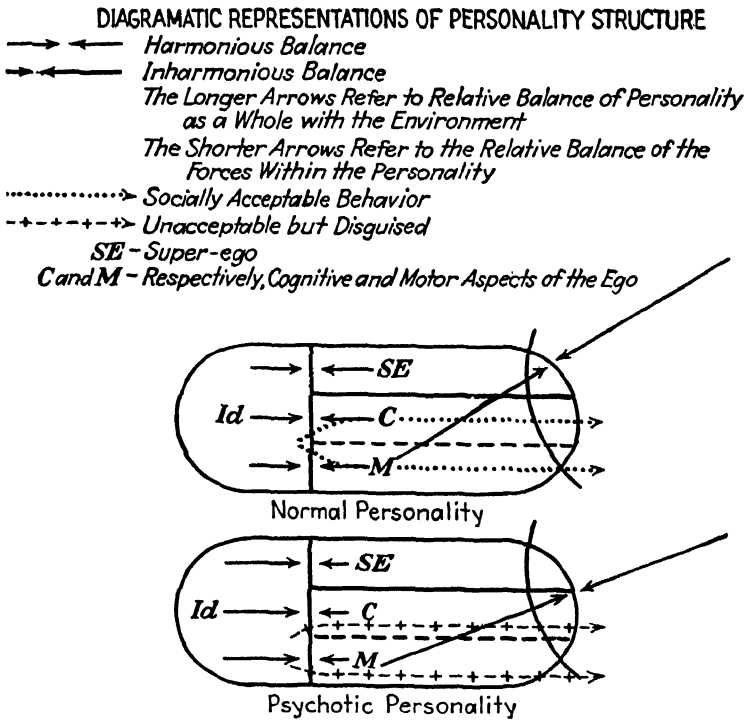


FIG. 10.—Comparing the normal and psychotic personality.

Those psychoses for which a specific organic pathology has been established we shall call "primarily organic." "Primarily" is used because even the psychoses with demonstrable brain pathologies raise problems of psychology, and the underlying physiology of the brain in the apparently functional psychoses is of the utmost importance. As psychopathology becomes more systematized, we are beginning to realize the importance of the psychological problems arising even in the organic diseases. But the idea that some psychoses are "organic" and some "functional" is so well established

in medical nomenclature that it seems advisable to use it as a starting point.

There are numerous ways in which the central nervous system may be subjected to forces which cause either temporary or permanent injury. Some of these bring about the complete and irreparable destruction of brain tissue. Others bring about a physiological status in which the normal processes of brain biophysics and biochemistry may not occur. Since we believe that for every change in the biochemistry and biophysics of the brain processes there may be a correlated change in psychology, many changes in brain physiology will bring about psychopathological states.

One common source of brain injury is due to bullets, accidents, blows on the head of all sorts. Any piece of steel, for instance, which goes through the cerebrum will extirpate certain portions of it and leave a permanent lesion. The amount of behavior defect conditioned by such lesions depends on the amount of the cerebrum actually destroyed and on the location of the destruction. Such problems of actual physical injury to the brain are primarily problems for the neurologists and we shall not have much more to say about them in this book. Just as physical injury to the brain from without may create the destruction of brain tissues, so may physical injury from within, such as cancers or tumors. The problem here is also one primarily for the neurologist and the brain surgeon. Similar destruction of nervous tissue may occur from disorders of the circulation, hemorrhage, venous or arterial clots, hardening or narrowing of the vessels. Furthermore, toxic conditions of the body may so poison the blood stream that psychosis ensues. Finally, infectious processes of a bacteriological sort are the cause of much brain injury. One of these, namely, syphilitic infection of the brain, is so frequent and of such importance that we shall use it as the illustrative psychosis to develop all our points of the problem of primarily organic psychoses. After a somewhat detailed discussion of paresis, we shall deal briefly with the other primarily organic psychoses.

3. Paresis

Syphilis has been so widely discussed in a rational and scientific fashion in recent times and knowledge of the cause of it has suddenly become so widespread that today nearly every intelligent person knows at least something about its cause, course, and treatment. While much is known popularly about syphilis, the information

about neurosyphilis has been more slowly acquired by the laity. One finds all sorts of popular misconceptions about neurosyphilis. Some individuals think that all syphilis ends in insanity, some even go so far as to think that syphilis is the primary cause of "insanity," while many, on the other hand, have not heard of neurosyphilis at all. There are various estimates made concerning the number of syphilitics in the United States. The most conservative estimate places it at several millions. Despite this vast number, we know that relatively few develop neurosyphilis. Syphilologists divide the disease into four periods, the first of which is the period of initial infection, in which the disease process is confined to the place of contagious contact. This phase, which occurs from two to six weeks after infection, is marked only by the development of a chancre. The secondary stage occurs about three months after this primary stage: the chief symptoms are the development of certain rashes on the epidermis and exposed mucous membranes. The tertiary stage is reached at a varying period of time, usually a year or two after the secondary, and in it the syphilitic process becomes internalized, so that any of the organs may be affected. Syphilis has hence been called "the great imitator," because before careful diagnosis its symptoms may be confused with a host of other diseases. In only about 5 per cent of the cases is there severe syphilitic involvement of the nervous system. Neurosyphilis may be considered as a fourth stage or as an extension of tertiary syphilis to the nervous system. Just as we are not certain which organs of the body will be affected by the syphilitic process, we are equally uncertain how far into the central nervous system the syphilitic process will go in cases of neurosyphilis. The involvement may be confined to the lower regions of the spinal cord, in which case we have *tabes dorsalis*. In tabes, the higher mental functions are but little affected, although the reflexes and major coordinations suffer markedly. It may go higher and affect certain of the cranial nerves, so that we get paralyses of eye reflexes, deafness, and other such signs. Only when the involvement becomes cerebral, however, do we have the development of psychotic symptoms proper. The lower forms of neurosyphilis remain primarily the province of the neurologist. Psychiatry is more concerned with brain syphilis, and we shall limit our discussion of neurosyphilis to the disease known as paresis, general paralysis of the insane, or dementia paralytica. This is not the only form of cerebral syphilis but it is by far the most common. In discussing

the psychiatry of this disease, we follow the plan outlined in the last chapter.

1. Name of the Disease and History of Its Differentiation.—It was not until the discovery of the microorganism of syphilis, the *Treponema pallidum*, in the nervous system that it was proved that many of the cases of what was then called dementia were of syphilitic origin. This discovery was made by Noguchi and Moore early in the twentieth century. Dementia was a term used throughout the nineteenth century to indicate the gradual falling away of the mentality of an individual who had previously been considered normal. Dementia meant that all the normal processes, cognitive, emotional, and motor, usually underwent some deterioration. It had been realized that some forms of dementia usually developed neurological motor signs and a process of rather quick deterioration, so that the disease which was later differentiated as neurosyphilis of the brain began to be known as *dementia paralytica*. Even Kraepelin in the earlier editions of his classical *Lectures on Clinical Psychiatry* attributes dementia paralytica occasionally to other causes than syphilis. Thus, we have an organic disease in which the psychological symptomatology allowed its differentiation from other psychological diseases—this time the dementia—before its organic basis was completely realized. Dementia paralytica, consequently, originally meant a dementia in which the factors of motor incoordination or paralysis were usually involved.

2. Incidence.—Syphilitic infection accounts for around 7 per cent of the patients hospitalized for the first time in American hospitals for mental disease in 1936; of the total resident population, however, it constitutes a considerable lesser percentage. The disease is growing less frequent because of the better knowledge of syphilis itself and the increase in the adequate treatment of the primary and secondary stages of syphilis. Many practicing psychiatrists who saw cases of paresis very frequently in the past see them rather rarely today. The disease occurs considerably more frequently in males than in females and, naturally, considerably more frequently in those occupational segments of male population in which illicit intercourse and visits to prostitutes are most frequent. Thus, we find that it is quite frequent among sailors, railroad men, and traveling salesmen, and more frequent in urban regions than in rural. The disease occurs most frequently in the fourth and fifth decades of life and the great majority of cases occur between thirty and sixty

years. It is, however, by no means unknown to find youths of twenty or old men past seventy developing the symptoms. The rate or speed of the syphilitic process is very uneven and depends on factors as yet unknown.

3a. Symptomatology of the Prodromal Period.—Paresis gives rise to cognitive, emotional, and motor symptoms. The individual will find cognitively that he has difficulty in concentrating, is easily distracted, forgets minor intentions, perhaps even loses his orientation. This may lead him into disastrous business or emotional ventures. Physically connected with the cognitive processes are headache and increased sense of fatigue, so that the disease is often confused with neurasthenia. Emotionally he becomes easily irritable and finds himself flying into rages and becoming easily afraid, and in the prodromal period most individuals become sexually hyperesthetic. Particularly marked is the decrease in moral responsibility. Very often individuals at this time will start to drink more heavily than usual, will start many flirtations, will become careless about money matters. Very frequently a respectable citizen will become more or less irresponsible, and his family and colleagues will perhaps attribute this to his desire for "one last fling." At this time, the individual also often begins to notice certain of the symptoms of motor paralysis. He may find it difficult to find his way around in the dark. He may step on the brake instead of the accelerator when he is driving his car. Among railroad men who are syphilitic, many accidents occur at this time. The extreme motor incoordinations such as are shown in paretic gait, speech, and writing usually occur later.

3b. Symptomatology of the Acute Period.—The symptomatology of the acute period develops out of the prodromal period. One may speak of an acute period in neurosyphilis only when nothing is done to arrest the progressive deterioration. It is true at times that there is a slowing up of the deterioration process after the first acute psychotic manifestations. This is often brought about by the fact that the decrease in social freedom attendant with hospitalization gives the individual less chance to develop psychotic aspects of his disease, particularly with regard to his emotional reactions. He may no longer "run wild." Consequently, even without treatment, we may have some remission of the symptomatology of the acute period, so that all the acute symptoms become less severe. Without treatment, however, the disease more or less slowly ends in a period

of complete dementia with complete deterioration of all the mental functions and early death. Thus perception, memory, judgment, affectivity, all finally deteriorate with concomitant progressive muscular weakness and atrophy and motor incoordinations. The neurological signs also usually appear.

3c. Symptomatology of the Recovery Period.—The recovery period varies according to when treatment is instituted and what the nature of the treatment is. It is a basic postulate of modern neurology that there is no restitution of nervous tissue once destroyed. Consequently, it is better to speak in this case of the arrest of the disease process rather than of the cure. The symptoms of the acute infectious period are, however, undoubtedly not wholly accounted for in terms of the actual lesions created by the organism. Rather, since we know that previously acutely ill paretics do become, superficially at least, almost well, we must suppose that part of the psychosis is due to a secondary toxemia or to psychogenic factors. While individuals who have gone into a deep paretic psychosis probably never make a complete recovery, malarial therapy, of which we shall speak shortly, does bring about a restitution of many of the mental functions which were lost in the acute period and leads to an arrest of further deterioration.

3d. Symptomatology of the Subforms.—Only recently have we known about the cure or arrest of paresis by malarial therapy. Before that, the disease was a progressive one in which complete deterioration and death ensued. After the development of the acute period it was possible to differentiate four subforms which the disease might take. The demented form (about 40 per cent of the cases) is marked by the development of the gradual mental deterioration without striking psychopathology of the single functions. The individual becomes morose, his memory processes suffer, his reasoning powers are diminished, and retroactive amnesia is severe. In the expansive form (about 20 per cent) quite a different picture is presented. This is chiefly marked by the most bizarre delusions of grandeur. The patient is the father of 10,000 children, he has two million dollars, he is about to give away three generalships in the army, etc. These delusions are often unsystematized and extremely irrational, but they are usually concerned with things which lie within the realm of physical possibility. Thus the individual will believe himself very rich, very strong, a great lover, and quite frequently all these things at the same time. There is marked

psychomotor excitement with this form. The galloping or agitated form of the disease affects only about 10 per cent of the paretics. In the galloping form, the deterioration is very rapid, so that the whole symptomatology of the acute period of the expansive form becomes telescoped into a period of time of a few months. In the depressed form (about 25 per cent of the cases) the delusions are hypochondriachal and self-accusatory in nature and the individual is depressed and irritable. There is psychomotor retardation and melancholia.

4. Differential Diagnosis.—The prodromal period and early acute period of paresis are chiefly confused with the manic-depressive psychosis and with the excited schizophrenia of the catonic form. Differentiation from these is always on the basis of the findings from the pathological laboratory. Prior to or failing the laboratory findings, the diagnosis may usually be made on the basis of the presence of the neurological signs—*i.e.*, the Romberg sign and the Argyll-Robertson pupil—or on the basis of the particularly paretic disturbances in the cognitive process. If there are delusions present, they are of a sort typical of paresis. They make a more complete break with reality than those of the manic-depressives and less of a break than those of the schizophrenics. These differentiae will be clear after the next chapter.

5a. Etiology: Organic Etiological Factors.—The organic etiological factors are well known and belong in the province of organic medicine. Paresis represents the actual destruction of nervous tissue by the syphilitic organism and the toxemic poisoning of nervous tissue by the by-products of this infection. There remain, of course, many facts to be worked out about the organic aspects of the problem. Medical syphilologists are working on this problem and gaining important results.

5b. Psychological Etiological Factors.—The mere fact that only a certain small percentage of syphilitics develop neurosyphilis at all and the fact that this percentage is almost identical with the proportion of the general population who become mentally ill make it possible to believe that paresis could be considered as a functional psychosis as well as an organic one. By this we mean that perhaps only in those individuals in strong psychological conflict situations do we find the invasion of the nervous system by the syphilitic organisms. This hypothesis is, to be sure, highly speculative but well in line with our contemporary ideas about the psychosomatic problem. Furthermore, as we pointed out in Chap.

III, the content and form of the disturbed cognitive processes of the paretic offer problems of decided psychological interest. While we should expect the person suffering from lesions of the cortex to deteriorate in his intellectual processes, it requires psychological treatment of the problem to account for the exact form and content of the paretic delusions. Work on the psychogenic aspects of paresis has just started and no systematic psychoanalytic theory is now available. Ferenczi and Holos and Schilder (1922) have dealt with this problem. Grotjahn (1938) has also developed interesting speculations about this problem.

6. Therapy.—It is entirely outside the scope of this book to give instruction in therapeutic practice. Insofar as we discuss therapies at all, we do so in order further to clarify the psychopathology involved. Paresis has been treated by very different methods on the organic side. They all have in common the aim of controlling the physiological infectious process underlying the symptomatology. Owing to a very important discovery of Dr. von Juaregg, today we know that the human constitution may recover from temperatures which are fatal to the *Treponema pallidum.* Paresis then may be treated by increasing the bodily temperature of the individual, either through genuine fever or through artificial fever. In malarial therapy, the individual is infected with the malarial organism and consequently forced to develop the sickness of malaria with its alternating high fevers and chills. More recently, some individuals have claimed that the creation of artificial fever through diathermy is equally effective. The present consensus of opinion seems to be that the malarial infection is more efficient, perhaps because certain waste products of malaria are valuable in neutralizing the waste products of the syphilitic infection. This is a problem now being debated in the literature and we can give no final answer.

On the other hand, psychotherapy of an analytic sort has been used as a secondary therapy with considerable success in helping the individual to readjust psychologically. Grotjahn (1938) reviews this problem. Undoubtedly other psychotherapies would likewise be of service here.

4. Other Psychoses of a Primarily Organic Etiology

We cannot in a book of this nature deal in detail with all the other primarily organic psychoses. If one consults the official report on nosology of the American Psychiatric Association, one

finds that twelve main groups of psychoses with a primarily organic etiology are classified and within most of these groups certain subgroups are differentiated. Although in this book we can discuss only the most important and frequent psychoses, for the sake of completeness we should at least indicate briefly the nature of the other psychoses. In this connection, it should be mentioned that the detailed descriptive psychiatry of these diseases is presented in some detail in all the larger works on psychiatry, such as the texts of Bleuler (1924), Rosanoff, Strecker and Ebaugh, and in the greatest detail in the more comprehensive handbooks, such as the works of Kraepelin (1915), of Bumke, and the publications of the American Association for Research in the Nervous and Mental Disorders.

The psychoses primarily of organic origin include all diseases where there is a demonstrable brain pathology. This pathology may be caused by actual destruction of nervous tissue through physical injury, and in this case we have the psychoses due to trauma, or the *traumatic psychoses*. The range and nature of these psychoses of course depend on the amount of nervous matter destroyed and the seriousness of the original insult. Such psychoses, naturally, are frequent in war and as a result of industrial and transportation accidents. We can distinguish here traumatic delirium, which is the general state of hallucinosis and lack of orientation immediately following any accidental destruction of nervous tissue. Following traumatic delirium, we may have possible traumatic personality disorders, which again depend on the amount of nervous tissue destroyed and which may take practically every form of symptomatic constellation. One also sees possible traumatic mental deterioration where the effect of the accident is largely shown in a diminishment of intellectual function. The incidence of psychoses due to trauma is relatively small, representing less than 1 per cent of the first admissions in mental hospitals. The etiology is easily established because the mental disease follows quite obviously upon the accidents. The symptomatology, as we have said, is very variable, depending on the amount of nervous tissue involved. The prognosis of course also depends on this. Some years ago, when neurophysiologists believed in a strict localization of nervous function and realized the fact that there is no regeneration of nervous tissue, the outlook for all these cases was considered poor. More recently we have come to the realization that the brain functions as an organic whole and that in the normal individual there is enough

unused cortex to take over, through retraining, many of the destroyed functions when the injury is not too severe.[1]

Nervous function may be interfered with not only through actual destruction of brain tissues but also through the pressure put on brain tissue through neoplasmic growth, or tumors. These are classified as *psychoses due to new growth.* These psychoses due to brain tumor are even less frequent than those due to trauma, representing only 0.2 per cent of the new admissions. The diagnosis is difficult and requires a thorough knowledge of neurology and specialized neurological techniques, such as encephalography, and cannot be enlarged upon here. Both prognosis and symptomatology depend on the size and position of the brain tumor. The prognosis depends further of course on the location and whether or not the tumor may be removed by surgery. Brain surgery has developed with great rapidity in recent years and, for cases where the tumor is not too large or long-standing, the chances for mental recovery after removal are good.[2]

Demonstrable brain pathology is also brought about by disturbances of *circulation.* By far the most frequent cause of such pathology with resultant psychosis is that of cerebral arteriosclerosis. Over 10 per cent of the first admissions in 1936 were diagnosed as psychosis with cerebral arteriosclerosis. The differential diagnosis is usually quite easy because it occurs in people of advanced age who have definite physiological signs of hardening of the arteries. The symptomatology is similar to that of the senile psychoses, which we shall develop in detail in Chap. XVII. The prognosis is of course poor since these individuals are of advanced age, but treatment can still be instituted which ameliorates the psychotic elements of the picture through reducing the brain pathology connected with arteriosclerosis. There are other and much rarer forms of psychosis due to disturbances of circulation, such as cerebral embolism, or interference with circulation of blood to the brain through a blood clot, and to disturbances brought about by cardiorenal disease, which is a syndrome of ineffectual heart action with ineffectual kidney elimination. These diseases account for only 0.6 per cent of the first admissions and are primarily a problem for internal medicine and neurology.

[1] *Cf.* the interesting experimental works of Franz, Lashley, and the clinical studies of Brickner.

[2] *Cf.* the works of I. S. Wechsler and Grinker.

Brain pathology may also be occasioned by disturbances of *metabolism, nutrition,* or *endocrine function.* To present these diseases with their varied symptomatologies is impossible in a book of this nature. Here again the problems are primarily those of internal medicine and secondarily those of psychiatry. Such cases account for 1.5 per cent of all first admissions. As an example of a disease primarily conditioned by disturbances in metabolism, we might mention exhaustion delirium. In exhaustion delirium, the catabolic processes have overweighed the anabolic for a long period of time, so that extreme confusional and hallucinatory states result. Unless there are severe medical complications, the exhaustion delirium disappears when the basal metabolic rate is satisfactorily reestablished. As examples of diseases due to improper functioning of endocrine glands, we might give hyper- and hypothyroidism, hyper- and hypo-insulinism, and Alzheimer's disease. Owing to the intimate connection which we now know to exist between the emotions and functioning of the autonomic nervous system and endocrine glands, all these diseases offer also important psychological problems. Here also symptomatology varies sharply with the nature of the endocrine disturbance and hence cannot be described in brief compass. These diseases may simulate either the primarily functional or the primarily organic diseases, and for their precise diagnosis both a thorough medical and a thorough psychological examination are necessary. Undoubtedly the most outstanding of the psychoses connected with nutritional upsets is the psychosis following pellagra. The outstanding picture here is of an extreme confusional and disoriented state greatly resembling schizophrenia.

There are also several psychoses with *unknown or hereditary causes,* but associated with organic changes of the nervous system. These are again relatively rare and account for less than 1 per cent of the first admissions. They too are primarily problems for the neurologist and internist. Among the more common are psychoses associated with multiple sclerosis, that is patchy disintegration of the sclerotic coating of the nerves, those associated with *paralysis agitans,* and those associated with Huntington's chorea.

The disturbances in brain functioning so far dealt with are due chiefly to pathological states which if uncorrected are likely to lead to permanent damage of the nervous system. There are two other important possibilities of disturbance. Temporary malfunction of

the nervous system may be brought about by *infectious processes* and by *intoxication processes.*

The outstanding psychosis due to infection has concerned us in our discussion of paresis. Other forms of cerebral neurosyphilis include the various types of meningovascular neurosyphilis, which account for some 1.4 per cent of the first admissions, where the mental symptoms are similar to but not so severe as those of paresis. A similar picture is presented by other diseases brought about by bacteriological infections of the nervous system. Taken together, all the infectious diseases of the nervous system besides those due to syphilis account for less than 1 per cent of the first admissions. The chief causes here are epidemic encephalitis, tubercular meningitis, and acute chorea. In all these psychoses the symptomatological picture depends of course on the amount of involvement of the nervous system. Epidemic encephalitis, meningitis, and chorea are, on the whole, diseases of the lower nervous centers, and the psychiatric picture is consequently one of disorder of the motor and emotional processes with little or no involvement of the cognitive processes. The disorders following epidemic encephalitis are primarily behavior disorders resulting from the diminution of the cerebral control on the thalamic impulses. In meningitis and choreatic psychosis the psychiatric problems which arise are due to disorders in the motor processes. The prognosis for these disorders of course depends on the amount of nervous tissue destroyed through the infectious process, and the treatment is concerned chiefly with arresting this process. In some of the diseases the bacteriological infectious process runs its course and partial to complete recovery is automatic. In others, such as meningitis, recovery depends on successful treatment of the inflamed meninges. The problem here is of course almost exclusively medical. This is not to be taken to mean that important psychological problems do not occur. Particularly in treating psychoses associated with epidemic encephalitis, emotional retraining or reorientation is of the greatest importance.

Temporary malfunction of nervous tissue is brought about by a host of intoxicants. Practically every race and every culture has used one or another of the *Lustgifte.* The psychological problem of why individuals use intoxicants at one time or another will concern us in more detail in Chap. XX, where we shall treat the problem of alcoholic addiction at some length. In this chapter we shall be concerned only with the primarily organic side of the problem, or the

physical effects of intoxication. The use of alcohol is so widespread among civilized people that of all the psychoses due to intoxicants those due to some form of alcohol represent 80 per cent. Of the first admissions to institutions in 1936, 4.8 per cent were due to some form of alcoholism, while only 0.6 per cent were due to other forms of intoxication. Consequently we must limit ourselves to a discussion of the effects of alcohol. Not everyone realizes that the extremely intoxicated individual is undergoing a psychosis, albeit only a temporary one, which disappears on his return to sobriety. If by psychosis we mean a break of the personality with social reality, we can call only acute alcoholic intoxication psychotic. The incidence of pathological alcoholic intoxication cannot be given because a great many individuals in western European civilization have had such a psychosis rarely or frequently in their lives. The psychological factors presented with repeated alcoholic intoxication will be discussed more fully in Chap. XX.

The more specific alcoholic psychoses are *delirium tremens*, *Korsakow's psychosis*, and *acute alcoholic hallucinosis*. Delirium tremens represents an acute delirium with confusion, disorientation, and marked paresthesias, which occurs usually following the withdrawal of alcohol after its continued heavy abuse. In this way, it is to be considered primarily a withdrawal symptom, and its course depends on the length of time necessary to restore metabolic equilibrium without alcohol in an individual who has previously become accustomed to it in heavy doses. The prognosis is good if the individual can be nursed through the recovery period without physiological collapse. The delirium and hallucinations disappear with restitution of a normal sober life, just as normality returns with sobriety in the case of the less extreme alcoholic. *Korsakow's psychosis* occurs in chronic alcoholics usually late in life after extreme abuse of alcohol. It is connected with some actual pathological destruction of brain tissue due to long-continued intoxication and is one of the few intoxication psychoses where removal of the toxic condition does not automatically bring about recovery. The symptomatology is similar to that of delirium tremens, with the exception that systematized delusions of a persecutory nature quite often occur with it. In acute *alcoholic hallucinosis* we have another disease which is due to the continued abuse of alcohol, where the primary picture is that of visual and auditory hallucinations rather than the paresthesias of delirium tremens.

The overindulgence in narcotic drugs results occasionally in psychotic manifestations. Thus we frequently have psychoses following the deprival of opium and its derivatives, and even extreme nicotine poisoning may result in mental states which approach the psychotic. The cause and prognosis are here of the same nature as in the alcoholic psychoses. Recovery occurs after the complete denarcotization of the individual unless the disease is of such long standing that there is an actual destruction of brain tissue. The symptoms are again varied but are chiefly marked by confusion, hallucination, and some mania. There are other much rarer psychoses due to intoxication by drugs other than the pleasure poisons. Interesting, though rare, are psychoses following lead poisoning and psychoses following carbon monoxide poisoning.

Statisticians estimate that about 45 per cent of all new admissions to mental hospitals suffer from diseases where the organic aspects in the etiology are primary. Even so these cases do not constitute so important a study to us as the primarily functional psychoses, for several reasons. In the first place, despite the psychologic factors the treatment of these diseases remains a medical rather than a psychological problem. In the second place, despite the high admission rate, the figure for resident population is much lower, owing to the high fatality rates in the more severe cases and the high recovery rates in the less severe cases. In the third place, there is reason to believe that in the future with our increased medical knowledge these diseases will be sharply decreased. We turn then to the problem of the primarily functional psychoses.

Bibliographical Note

The larger specific psychiatric texts go into the problem of the organic psychoses much more fully than we do here. *Cf.* the bibliographical note of the last chapter. Case histories may be found in all the standard psychological and psychiatric texts. Some of the texts which develop extended case histories are Kraepelin (1915) from the standpoint of psychiatry, McDougall (1926) from the standpoint of psychology, and Southard and Jarrett from the standpoint of social psychiatry. From the standpoint of this book, the reports of cases which have been psychoanalyzed will be more interesting. Freud's (1924*a*, Vol. III) case histories are the standard examples. Also interesting are the cases in H. Deutsch (1932) and the clinical accounts in Fenichel (1934), Schilder (1928), and Ives Hendrick.

CHAPTER XVI

THE PSYCHOSES PRIMARILY FUNCTIONAL IN ORIGIN

1. The Extent of the Problem of Functional Psychosis

Although the primarily organic psychoses account for nearly one-half of all first admissions to hospitals, the primarily functional psychoses are of greater importance medically and they are of greater interest to us as psychologists. They represent a more important medical problem because on the whole they are of longer duration, occur earlier in life, and are perhaps even more incapacitating. One group of them, the schizophrenias, occupies over one-half the beds in mental hospitals and over one-quarter of the beds in all hospitals.[1] The average hospitalization duration of schizophrenia is over sixteen years. That of paresis is only two years. Although the manic-depressive psychoses and paranoia, which represent the other chief functional psychoses, are neither so frequent nor of so long duration as schizophrenia, they are both more frequent and of longer duration than any of the primarily organic psychoses.

In the organic psychoses, the primary etiological factors are "accidental" or at all events usually arise outside the integrated life history of the individual. The functional psychoses are of greater interest to us as psychologists because in them the primary etiological factors are psychological and hence belong within the integrated life history. Functional psychoses arise on the basis of frustration of basic urges. The symptoms of functional psychoses always show a cause, have a significance, and are economical with regard to the total life history of the individual and so will illustrate the chief theoretical basis of our book. The reader is however once again reminded that the functional psychoses also present organic problems. We have given so many illustrations of this that it should by now be obvious.

The psychological nature of the psychoses has already concerned us in Chap. XV. There is a sharp disbalance between the parts of

[1] This statement may be a little misleading since general hospital beds are occupied on the average but 35 per cent of the time, while mental hospital beds are almost continuously occupied.

the person (ego, superego, and id) so that behaviors originating in the id are accepted by the ego in a disguised form and allowed outlet. The conflict is between the ego plus the id and social reality. The superego plays a varying role in this conflict. There is both libidinal and ego regression. All these points are perhaps most clearly to be seen in the schizophrenias, which we shall discuss next.

2. The Schizophrenias

1. The Name of the Disease and History of Its Differentiation.—The group of psychoses which we now call the schizophrenias was previously called "dementia praecox." Before the differentiation of dementia paralytica (*cf.* the last chapter), these cases were generally classified with the dementias. Until the nineteenth century mania, melancholia, and dementia were the chief categories of descriptive psychiatry. While dementia paralytica was realized to be accompanied by neurological signs, it was noted that certain cases of dementia occurred almost exclusively in the years following puberty and were not accompanied by neurological signs. To these cases, Kraepelin gave the name "dementia praecox," which means literally a precocious falling away of the mind, and distinguished dementia praecox from the manic-depressive psychoses. Dementia, in contrast to amentia, means loss of mentality in individuals who previously were normal. The demented individual was one who was supposed quickly or gradually to lose his various powers of cognition and in whom the emotional reactions became quite inappropriate to the real situation. The powers of perception, attention, reasoning, memory, and association were all considered gradually to diminish. Dementia praecox became the most frequent of all mental disorders and the most tragic, because it was known to occur in very young people and was considered frequently to be an irreversible process, in which the dementia gradually increased.

Although the laity in general still uses the term dementia praecox and thinks of the disease as a precocious dementia, we know that this conception of the disease is inadequate. Bleuler (1912) first pointed out that the name dementia praecox was a double misnomer. In the first place, the symptoms associated with dementia praecox are realized to occur in persons of all ages—even if the highest rate of incidence is between twenty and thirty years of age. In the second place, it is realized that the mental processes do not necessarily progressively diminish in their efficiency, but rather become split

off from their proper relationship to social and physical reality. Thus the mental processes of the dementia praecox patient are by no means without rhyme or reason but rather follow a peculiar syntax and grammar of their own. C. G. Jung (1909) was able to demonstrate this convincingly. Even the typically bizarre associations of the dementia praecox patient occur in a meaningful language, but it is a language different from that which the adult is accustomed to use. It is not controlled by the real social situation. In recent times, some psychiatrists and psychoanalysts have reached the point where they can make at least fairly good translations of the schizophrenic thought processes. Similarly, it is realized that the delusions and hallucinations and memory defects are definitely meaningful when one considers the life history. Previously it was thought that dementia praecox patients rarely recovered. Today we know that many do recover and recover to the extent that they are at least as well as before the overt manifestations of the sickness. For all these reasons Bleuler (1912) introduced the term *schizophrenia* to describe this disease. Schizophrenia means literally "a splitting of the mind" and describes the basic picture of the disease much more accurately than does dementia praecox. Today many psychiatrists speak of the schizophrenias, because, as we shall see, symptoms of schizophrenia occur in quite different constellations. All the schizophrenias have this in common, however. The central core of the personality, the ego, breaks with the reality principle so that the emotions are no longer appropriate to the real situation. The emotions are split off from the real situation. This split is shown in mild cases simply by shallowness of appropriate emotional response and mild ego regression and in severe cases by a complete lack of emotional response to the real environment and a deep ego regression.

2. **Incidence.**—The schizophrenias are the most frequent of the major psychoses. In the United States 18.2 per cent of first admissions to mental hospitals are diagnosed as schizophrenia. Since the average hospitalization time in schizophrenia is sixteen years, close to 45 per cent of the resident population are schizophrenics. The incidence of the disease varies sharply with age. Starting in the early teens, the incidence is by far the highest between twenty and thirty, and falls rapidly thereafter. There are, however, first admissions reported as late as the seventies. The disease is more frequent in males than in females and in urban than in rural communities, and its victims tend to come from the lower but not the extremely

low cultural and economic levels. Probably it occurs more frequently in some historical epochs than in others. The schizophrenic individual usually becomes sick early in life, is hospitalized, and, although he has some remissions and discharges, often must return periodically until he dies from some physical cause. Schizophrenia is in many respects the most serious of all the major diseases, but it is by no means the most fatal. In fact, schizophrenia itself does not kill anyone. Only 6 per cent of the schizophrenics recover in any year.

3a. Symptomatology of the Prodromal Period.—The basic picture common to all the schizophrenias is the withdrawal of the person from reality with a splitting off of the appropriate affective charges from the cognitive processes. This withdrawal and splitting, although often not obvious to the layman, is the basic factor of the early symptomatology. An individual who previously has been *superficially*, at least, intellectually alert, socially active, and *seemingly* emotionally balanced begins to be irresponsible and inaccurate in his cognitive processes and to be indifferent toward social obligations and social pleasures. On closer analysis of past history, one usually finds that the individual has always shown a somewhat "schizoid" character, or, in other words, has never developed an integration of the cognitive and the emotional processes. The onset is usually very slow so that the individual, if he is in school, turns in slightly poorer work, or, if he is in business, does his work somewhat less efficiently. He gradually withdraws from social events of both an obligatory and a pleasurable sort and quite often shows emotionally inappropriate behavior. Along with this, he begins to develop peculiar mannerisms of posture, gait, gesture, and facial expression. What the individual is doing is gradually withdrawing from reality, because, for reasons which we shall discuss later, the real social situation has become unbearable to him. Usually at this time he suffers a great deal of anxiety. He is worried about what is going to happen to him. He may feel that he is going insane. He is depressed at the meaninglessness of life. In some cases this anxiety reaction becomes very severe and we then have what is known as the *schizophrenic panic*. In the panic, the individual suffers acute fear concerning everything in his life situation. In this phase, the psychotic picture is quite obvious to everyone.

3b. Symptomatology of the Acute Period.—The symptomatologies of the subforms in the acute period are so different that we must deal with them separately. We know that schizophrenias represent

something of an entity because of the split between the emotions and the cognitive processes common to all of them. Common to all, too, is the incoherence of associations, which become more or less desultory or bizarre. In all forms there is a surface apathy so that the feelings and emotions gradually deteriorate. There are impulsive and purposeless acts; there are schizoid mannerisms and jerky inappropriate gestures. These general symptoms are the surface signs of the splitting-off process.

There are four generally recognized subforms of schizophrenia. In the first of these, *dementia praecox simplex*, there is emotional deterioration, apathy, lack of interest. The conduct is inappropriate and neglectful. Mild delusions may occur but these are rather unsystematized. Hallucinations are rare. This is primarily an adolescent form of schizophrenia. The hospitalized cases are less frequent for this than for the other forms, but such individuals are by no means rare. Many tramps, prostitutes, and petty criminals are undoubtedly suffering from the disease. Many of them make some form of economic adjustment. Similar to these is the group for which Zilboorg (1940) has adopted the term ambulatory schizophrenia. The ambulatory schizophrenic is much like the schizoid character which we shall discuss in Chap. XX. The transition from dementia praecox simple form to the schizoid character is gradual.

In *dementia praecox hebephrenic form*, we have a much deeper and much more rapid regression. Hallucinations are frequent. Delusions are particularly fantastic, silly, and incoherent. The associations show a poverty of ideas and are made in stilted phrases. The coinage of neologisms is frequent. The hebephrenic frequently shows purposeless mannerisms and inappropriate gestures. Of special diagnostic significance is the hollow meaningless laugh with the accompanying facial grimaces. In extreme forms, the individual regresses to childhood, talks baby talk, behaves in a babyish fashion, and may even be incontinent and unable to dress himself. Hebephrenia is a relatively rare form of schizophrenia.

The most common of the subforms of schizophrenia is *dementia praecox catatonia*. Catatonics show either severe schizophrenic excitements or severe stupors. These may alternate or either form may predominate. The excitement is characterized by increased psychomotor activity, numerous impulsive and compulsive acts, and associations showing extreme incoherence verging frequently on

word hash. The catatonic stupor is characterized by mutism and catalepsy. The individual apparently is psychically completely withdrawn from reality.

Dementia praecox paranoid form shows the presence of the other symptomatologies plus paranoid delusions. It is difficult to differentiate clearly between paranoia and the paranoid form of dementia praecox. Consequently, we shall handle the symptoms of the paranoid form when we speak of paranoia.

3c. Symptomatology of the Chronic Period.—In *dementia praecox simplex* the acute period goes progressively into the chronic period. The split of the cognitive and emotional processes continues and may even become sharper. Very often, however, schizophrenics make enough social recovery that they may be put to work at various menial tasks under careful supervision. They become the laborers, floor scrubbers, laundry workers, and gardeners of the hospital.

The prognosis for the acute catatonic form is the best. The acute catatonic, instead of going into a chronic period, usually makes at least one very successful recovery. If the recovery is not enough to allow the patient's parole to the outside world, the individual in the chronic period may present a clinical picture very similar to that of the simplex type. There is a continued slowness of both the cognitive and the emotional processes, but the hallucinations, delusions, and bizarre motor reactions disappear almost completely. In the hebephrenic form, the acute period to a certain extent is never overcome. The hebephrenic symptoms remain quite obvious to all observers. The individual may quiet down considerably but he remains definitely psychotic. We shall have more to say in detail about the paranoid form in connection with the disease paranoia.

3d. Symptomatology of the Recovery Period.—One of the most debated problems in modern descriptive psychiatry is the problem of recovery in the schizophrenias. Until recently many psychiatrists treated reports of recovered cases of schizophrenia with considerable suspicion. Even today one frequently meets a psychiatrist who says recovered schizophrenics simply do not exist. They believe reports in the literature to be cases of incorrect diagnosis. The more modern view, on the other hand, seems to be that schizophrenics, particularly the catatonics and some of the simplex type at least, make good social recoveries. There are good reasons for believing that the schizophrenic never recovers to the extent that he is as well adjusted as, say, the manic-depressive individual in his periods of remission,

but there are also reasons for believing that the schizophrenic never was well adjusted, even before the acute manifestations of his disease. Certainly social recovery is frequent, although very often the individual must return to a simpler type of activity than performed before his sickness. The recovery process is to a certain extent the reversal of the prodromal period. As the individual gradually withdrew from reality, so he gradually returns to it. This also varies in the various subforms. Acute catatonia strikes almost like lightning. The recovery process in some cases at least seems to be equally rapid. The individual suddenly says, "I don't know what was wrong with me recently, but I'm all right at the present time." In the other forms, the recovery is not only rarer but takes longer.

4. Differential Diagnosis.—Practically all the symptoms of mental disease are exhibited in one form or another in the schizophrenias. Correct diagnosis is only possible on the basis of a picture of the constellation of individual symptoms which we know as the schizoid pattern. Essential to the diagnosis of schizophrenia is the demonstration of withdrawal from reality and the splitting of affect from normal cognition. The disease most frequently confused with the schizophrenias is the manic-depressive psychosis, which in its manic phase resembles excited catatonia and in its depressive phase resembles catatonic stupor. The differentiation here is relatively easy on the basis of the association process and the nature of the delusions. The catatonic delusion is much more irrational, much further from reality than is that of the manic-depressive patient. The slowing down of associations in the depressed patient is usually a matter of retardation, while in the schizophrenic one often finds complete blockage. Schizophrenia is differentiated from the neurosyphilitic psychosis, of course, on the basis of laboratory tests. The simplex form is often confused with mental deficiency or hypophrenia. If there is a history of a previous better adjustment, this possibility is ruled out. However, there are many individuals at large who to their fellow men seem simply mentally deficient but who would be found on closer examination to be suffering from schizophrenia of the simplex form. The paranoid form can usually be differentiated on the basis of the schizoid personality picture and delusions of grandeur and persecution.

5a. Organic Etiological Factors.—There have been countless studies of the basal metabolism, blood chemistry, encephalography—

in fact, of all the measurable physiological processes—in schizophrenia and, although differences between schizophrenics and normals have been found, none of these is pathognomic. In other words, although schizophrenics as a group show rather decided differences in such measurements from normals, the distributions of the schizophrenics and the normals overlap sharply and none of these distributions includes only schizophrenics or normals. These differences are to be expected when one considers the mode of life of the schizophrenic with all its withdrawal phenomena. Since schizophrenics fail to utilize neural energy in the normal adjustive mechanism it may be that certain physiological processes, even of the irreversible sort, develop as concomitants of the disease. This would account for some of the physiological findings and to a certain extent for the therapeutic failures.

That there are physiological or organic factors in schizophrenia is indicated by three lines of evidence. The work of Bancroft (*cf.* Chap. III) indicated quite clearly that there is some inhibition of the thalamic function by the frontal lobe in the disease. Of course, the psychological maladjustment may be and probably is more basic. The work of Meduna on metrazol shock and Sakel in insulin shock therapy (to be discussed below) also indicates the importance of physiological factors. Finally Kretschmer's finding of the decided affinity between schizophrenia and the athletic-asthenic body builds may indicate a constitutional predisposing factor. None of these facts, however, prevents us from viewing schizophrenia as a primarily functional psychosis.

5b. Psychological Etiological Factors.—There are many psychological theories of schizophrenia. None of these gives us answers to all questions which arise in connection with schizophrenia, but we have a much more precise psychological picture of the disease than we had but a few years ago. The schizophrenic without doubt is the individual who regresses to early infantile patterns because he is unable to accept the consequences of the adult psychosexual adjustment. His inability is in itself founded on a long history of maladjustment. The disease breaks out into its acute form, however, in the adolescent period or later.

Several writers, like A. Meyer, Bleuler (1912), Hoch, and Jung (1909), have posited the existence of schizoid, autistic, dereistic, introverted personality types. These all have in common the withdrawn personality and an improper integration between the affective

and cognitive processes. The schizoid character type, which may be said to represent the schizophrenic individuals without definite psychoses, will be discussed in Chap. XX. Although there are undoubtedly certain predisposing constitutional factors (*cf.* Kretschmer's findings, in Chap. XIII) the psychological factors are probably more important and better understood.

Of the various psychological theories that of psychoanalysis is the best developed. Schizophrenia represents a deep libidinal and ego regression. In extreme catatonic stupors, individuals may even adopt intrauterine positions. The libidinal regression is to the oral sucking or dependent phase; the ego regression to the level of early narcissism. The extreme introvertedness of the schizophrenic thus follows from his failure to have objective libidinal cathexes. The dreamlike quality of his associations comes from the predominant role of the id in determining his logic. The hallucinated voices and figures represent projection of the previously introjected parental images. His schizophrenic gesturings and postures represent normally unconscious ideas to which his weakened ego allows expression. His delusions can almost always be shown to come from unconscious wishes which are not controlled by the reality principle. The schizophrenic splitting represents the return to the early level where affect and cognition were not yet differentiated.

The precipitating factor in the disease lies in the conflicts of adolescence. The schizophrenic is unable to accept his sociosexual responsibilities and so has a regression to the earliest level of libidinal development. Some constitutional factor is undoubtedly active, and early traumatic experiences play a role. The Oedipus situation has never been properly resolved, and many if not most schizophrenics have particularly strong unconscious homosexual strivings.[1] Some writers, like Sullivan (1931) and to an even greater extent Rosanoff, see the basic cause of the schizophrenic panic as regression to avoid the consequences of unconscious homosexuality. The most striking aspect of schizophrenia is the inability of the patient to resolve the conflict of adolescence which requires acceptance of sociosexual responsibility and hence his consequent regression to early infantile levels.

6. Therapy.—At the present time we have no specific treatment for the schizophrenias which is in any way comparable to that of the malarial treatment for paresis. Some studies have been made of the

[1] The theory of homosexuality will be developed in Chap. XIX.

factors which have been operative in the so-called "cases of automatic recovery." H. S. Sullivan has been fairly successful in bringing about some recovery by the creation of a particularly favorable environment. Tidd has made interesting observations on automatic recovery. Recently considerable success has been claimed for the so-called "convulsion therapies." The first one of these used was Sakel's method of treating schizophrenia by a series of overdoses of insulin. Such overdoses create an acute hyperglycemia with an epileptoid seizure, followed by a complete coma. Meduna's treatment by metrazol injections is less severe but also creates an epileptoid seizure. It has certainly been demonstrated that in the case of young schizophrenics, in whom the disease is of short duration, more recoveries are obtained following these treatments than without them. The physiological and psychological factors in these cures, however, need further evaluation.

Although we have no specific therapy for the schizophrenias, we have at least discovered a great deal about the etiology of this disease, and the possibility of dealing with it preventively is much greater today than ever before. Our increased knowledge of the psychological factors in the disease process makes psychotherapy at least a possibility. Psychoanalytic psychotherapy (*cf.* Chap. XIV) may be used where lack of ability to create a real transference still makes deep psychoanalysis impossible. Despite therapeutic advances, the real hope lies in preventive rather than therapeutic medicine in this field. If we could in the first place prevent the development of the early trauma of the infantile sex period and in the second place bring individuals who have developed the schizoid personality through the difficult readjustment period of adolescence, a great deal could be done toward cutting down the incidence of this most severe of the functional psychoses.

3. The Manic-depressive Psychoses

1. Name of Disease and History of Its Differentiation.—Through the period of the development of descriptive psychiatry in the latter part of the nineteenth century, it was realized that there were two rather basically opposed types of psychotic reaction which showed acute manifestations and later disappeared. These were called "mania" and "melancholia," which were roughly differentiated from the various dementias, and all three together considered to constitute the severe psychoses. The manic individual was known to exhibit

behavior such as that associated in the popular mind with the maniac. He was known to become excited, to expend great amounts of energy, to throw prudence overboard with regard to his own safety and that of others, and to lose his social inhibitions. The whole behavior was rather similar to that of an acutely intoxicated individual except that it continued over a considerably longer period of time. The melancholic individual was known to present almost the inverse of this picture. Instead of being able to do a great deal more than he previously could, he was able to do much less. Instead of feeling fine, he felt "rotten." Instead of feeling powerful, he felt weak. Instead of feeling guiltless, he felt guilty. Previously, we have spoken of the differentiation of the various forms of dementia from the concept of dementia. In the case of manic-depressive psychosis, we had better think of an integration. It was one of Kraepelin's (1921) greatest services to psychiatry to show that what was known as acute mania and acute depression were in reality two aspects of a single disease form. Just as in the alcoholic, the hangover with its postalcoholic depression follows the intoxication, so in the depressed individual, the depression follows the maniacal excitement. Today we realize, although it is not always apparent on superficial observation, that there is probably no depression that is not followed by some abnormal elation and no acute mania which is not followed by some depression. Actually psychoanalytic studies have shown us that the manic phase in itself is an attempt to cover up the anxiety and fear of subsequent depression. Furthermore, in the mixed or agitated forms we have mania and depression side by side, not merely following one another. Nearly all of us suffer some fluctuation in mood. We alternate between feeling fine and up to a great deal and feeling bad and not up to much. In the manic-depressive individual such alterations of mood are highly exaggerated, so that the individual becomes psychotic in that the mood is not at all appropriate to the real life situation. Schizophrenia is primarily a psychosis where there is a split between the affective and cognitive processes so that the patient's reactions are inappropriate, while the manic-depressive psychosis leads rather to an exaggeration of emotional response. This distinction, however, is relative rather than absolute.

2. Incidence.—The manic-depressive psychosis is the second most frequently admitted of the psychoses. About 12 per cent of the new admissions to mental hospitals are so diagnosed. Because of the

higher recovery rate, however, this disease accounts for only 12 per cent of the resident population. Of these, in a given time, about 45 per cent will show symptoms of depression and about 45 per cent those of mania, and about 10 per cent will show mixed symptoms, *i.e.*, excitement and depression at the same time. The disease occurs slightly more frequently in females than in males and is slightly more frequent in economically superior groups. It occurs with greatest frequency somewhat later in life (in the fifth decade) than does schizophrenia. This is not to be taken to mean that no young person develops a manic-depressive psychosis. Actually, the first attack very often occurs in the late teens or early twenties. Even in those cases where the first hospitalization is made in the later thirties or early forties, a case history reveals extreme fluctuations of mood usually extending far back into the lifetime of the individual. It is claimed also that the manic-depressive psychosis is a disease which affects people more intelligent than those affected by schizophrenia. This, however, must be taken with a grain of salt, because the intelligence of schizophrenics is almost impossible to determine with the standard psychometric tests, and thus the mental inferiority of the schizophrenic found in these tests may be but a symptom.

3a. Symptomatology of the Prodromal Period.—In the manic-depressive psychosis, far more than in any other which we have yet studied, there is usually a definite precipitating factor. These precipitating factors are looked on, however, by modern psychiatrists very much as modern historians look on the so-called "precipitating factors" in wars. The precipitating experience is more or less simply the catalyzing factor, which brings out the psychosis already determined in the underlying dynamics of personality. The precipitating factor in the manic-depressive psychosis is usually the loss of a loved object or an extreme frustration. The loss may be that of a friend or of money or of position. The frustration may be failure to get ahead, to gain a desired position, to arrive at some type of goal. All of us become depressed, at least to a certain extent, at the loss of either money or a loved one. All of us may react with rage, and we think, justly, when we do not get something on which we have had our hearts set. The original mania or depression may be looked on as simply an exaggeration of normal reactions to loss and frustration. When the normal individual loses a loved one, he goes into a period of mourning. The world seems a poorer place and he seems a very unfortunate individual. In depression, the loss is felt, but in addi-

tion to that there are feelings of guilt and of one's own unworthiness. When the normal individual is badly frustrated, he may fly into a rage, but he does so with certain feelings of responsibility to his objective situation. The manic individual seems to lose all feelings of personal and social responsibility. Thus in the prodromal period of either the manic or the depressive attack, we have a precipitating factor—the loss or frustration—and the development of too much emotionality concerning it or the development of inappropriate emotionality. The average individual would react to the loss of a very near relative with considerable mourning but would at least be partially cheered upon hearing that the relative had left him a sizable fortune. The depressed individual cares nothing about this. He feels the world not only poorer but himself guilty and unworthy, even of receiving the money. The average individual again reacts to frustration with rage or may even go on a "bust" or "bender." He soon tires of this, however, and returns to the real situation. The manic individual may use up both his financial and his bodily resources to the extent that his family sees that he must be hospitalized. The prodromal period, then, of the manic-depressive psychosis starts with an extreme exaggeration of the rather normal responses to loss or frustration.

3b. Symptomatology of the Acute Period.—The symptomatology of the acute period in the manic-depressive psychosis depends on its form. In the elated periods, besides the elation of mood we find distractibility, flight of ideas, pressure of activity, indulgence in anti-social acts without feelings of guilt or remorse. Delusions of power and potency are also frequent. In the depressed periods, besides the deep depression we find inattention to the real environment, feelings of unpleasantness, psychomotor retardation with exaggerated feelings of fatigue. Delusions when present are hypochondriachal or concerned with guilt. In a psychotic (as opposed to a neurotic) depression, some guilt feelings are always present. Both forms show different aspects (*i.e.*, the depressed or the elated) of a basic maladjustment structure. The attention is weakened, the affectivity is inappropriate, the associations are inadequate, and the motor acts are not properly integrated. In the agitated depression or the mixed manic-depressive psychosis, the symptoms of elation and depression occur side by side.

3c. Symptomatology of the Recovery Period.—In the manic-depressive psychosis one does not have to speak of a chronic period in

that the individual apparently recovers completely and automatically. He undoubtedly maintains his cycloid character in the period of remission of the psychosis. He may even fluctuate between near psychotic and normal levels of elation and depression. The disease is still particularly vicious because the chances of permanent recovery are small unless an individual is treated psychotherapeutically or returned to an environment relatively free from stress.

4. Differential Diagnosis.—The depressed phase of the manic-depressive psychosis is most likely to be confused with dementia praecox catatonia of the stuperous form, with the depressed type of paresis, or with severe neurotic depressions, of which we shall speak in Chap. XVIII. Differentiation from severe neurotic depression is indeed not always possible, and borderline cases exist between neurotic and psychotic depression. In general, the depression is called psychotic when severe and irrational guilt feelings occur with the other symptoms, neurotic when these are absent or mild. Differentiation from paresis is of course on the basis of laboratory tests and history of syphilitic involvement. Differentiation from catatonic stupor is made on the basis of the associations (retardation rather than blocking, less severe break with reality) and on the nature of the delusions. Similarly, the manic phase may be differentiated from catatonia and hebephrenia on the basis of the associations (flight of ideas rather than word hash) and the severity of the delusions (obviously deluded but the claims are at least conceivable—the manic individual often considers himself extremely wealthy, but seldom of royal birth or divine). Laboratory tests and motor symptoms again allow differentiation from expansive paresis.

5a. Organic Etiological Factors.—Of all the psychoses, the manic-depressive gives the most certain evidence that some hereditary factor is involved. Only recently have we had studies which are at all accurate in the field of the inheritance of mental disorder. The earlier studies which attempted to account for the disease on a purely hereditary basis have been largely discredited. It can be shown, however, that the expectancy of manic-depressive psychosis in children of manic-depressives is some twenty times as great as it is in the children of non-manic-depressive patients. Such figures, however, not only fail to account for all manic-depressives but cannot even be weighted to give us the relative role of heredity in causing this disease. Since we know that many of the psychological characteristics of the parents are taken over by identification, it is natural

that some manic-depressive psychoses will develop on an *apparently* hereditary basis when the *true* cause is psychological.

On the organic side must also be mentioned Kretschmer's findings with regard to body build. The affinity of the pyknic body build for the manic-depressive psychosis is even more clearly marked than that of the asthenic-athletic build for schizophrenia. This, however, is again a factor which can only enter in the "choice" of the psychosis. The world is full of pyknics who never become psychotic.

Dr. Curt Richter has written an interesting paper in which he points out the fact of variant life-activity cycles in certain animal forms. He attempts the thesis that some constitutional types are markedly cycloid in their excitation-depression ratios, and underlying the manic-depressive psychoses there may well be marked constitutional extremities in these ratios. Undoubtedly constitutional factors are of importance as predisposing elements in determining whether an individual who becomes psychotic will develop a manic-depressive psychosis or not. The manic-depressive psychosis still remains primarily a functional psychosis and we know quite a lot concerning the psychology of it.

5b. Psychological Etiological Factors.—In general, the manic-depressive has the extraversive, cyclothymic personality as a premorbid picture. The psychoanalytic theory of the manic-depressive psychosis is better developed than that of schizophrenia. However, from psychoanalysis, we understand melancholia and the depression considerably better than we do the mania. Freud (1924*a*, Vol. IV) and Abraham (1927) did the pioneer studies which pointed out that the depression represents an introjection of the hostility which was previously felt toward the lost love object. This hostility was previously neutralized by the erotic elements but when the loss occurs the individual turns the whole hostility back on himself. Thus, he hates himself (*i.e.*, is guilty) for his previous hate and requires love to cover his incapacity to love. In the loss of love objects where there is a less ambivalent relationship (*i.e.*, where the love cathexis is predominant) there is sadness and mourning and a need for readjustment (*i.e.*, depression without guilt feelings). The libidinal attachment to the love object has usually not gone beyond the late oral (oral biting, or oral sadistic) stage, and Abraham is able to show that, lying behind the psychological introjection, there are unconscious cannibalistic desires actually to incorporate the love object. From this, he derives the loss of appetite, the delusions of

being unable to eat and of being poisoned, which are so frequent in these patients, as *reaction formations* against this *oral sadism.* The libidinal regression in the manic-depressive psychosis is hence to the late oral stage. The superego of the depressive is particularly severe because it contains the introjected hostility which was previously turned outward. This aspect of the superego is largely unconscious.

We do not understand the manic phase nearly so thoroughly. In general, we understand the psychological law of retribution and retaliation. From childhood, punishment serves to wipe out the consequences of our sins, and all religions and all societies have institutions for easing individual and social conscience. We have already touched on this topic in connection with our discussion of the superego and the aggressive urges. The manic phase then is a release of id-directed drives after retribution has been made in the depressive phase just as depression is the retaliation for the "sinning" of the id in the manic phase. In the manic phase, the superego to all intents and purposes disappears. The behavior is still infantile and regressed. The individual allows himself every possible late oral satisfaction short of cannibalism itself: drinking, abusive language, excessive love-making. Actually the two phases, which are superficially so different, are more than genetically related. The manic individual is driven by a vague sense of impending doom, the superego really is not completely lost, and the depressed individual gains a deep narcissistic satisfaction from the suffering which his suffering causes others.

6. Therapy.—As was the case in schizophrenia, no specific therapy is known for the manic-depressive psychosis. Recently the insulin shock and metrazol therapies have been used with even more striking success than with schizophrenia. From this fact, very interesting psychological speculations may be made. If the depression represents a psychologically self-inflicted punishment for previous hatred (and the theory of Freud and Abraham makes this seem likely), the severe treatment of the convulsion therapy treatment may be interpreted as punishment. The development of convulsion therapy treatment of the manic-depressive psychosis, is, however, too recent to allow a final evaluation. It is highly likely that, like so many similar therapies in the past, used alone it will cause only remissions rather than recoveries. There are, of course, various forms of medicinal therapy and physiotherapy which may be utilized either to quiet the excitement of the manic patient or to stimulate the slug-

gishness of the depressed patient. These lie in the realm of medical practice.

The manic-depressive psychosis is more amenable to psychotherapy than is schizophrenia for several reasons. In the first place, the regression is never so deep and the patient is never completely without insight into his condition. He is somewhat less narcissistic and there is a greater opportunity to establish transference with him. Furthermore, manic-depressives usually have recovery periods. In these periods, psychoanalytic psychotherapy and even psychoanalysis can be introduced sometimes very successfully.

4. Paranoia

1. **Name of the Disease and History of Its Differentiation.**—We have already learned something about paranoia in our discussion of the paranoid form of schizophrenia. True paranoia now to be discussed is a relatively rare disease of simple symptomatology but of great interest because of our comparatively complete knowledge of its psychology. We can, however, discuss it briefly. Paranoia was differentiated from the general group of dementias in the nineteenth century. It means literally "false reasoning." In general, it refers to a psychosis which develops relatively late in life and is highly monosymptomatic in that the patient has a systematized set of delusions of persecution which are usually balanced by delusions of grandeur.

2. **Incidence.**—True paranoia accounts for less than 2 per cent of the first admissions and less than 1 per cent of the resident hospital population. It is slightly more frequent in males than in females and occurs most frequently in the fifth decade of life. The nature of the disease is such, however, that these statistical figures are highly misleading. True paranoia probably represents no distinct disease entity but ranges into paranoid schizophrenia, which we just discussed, on the one hand, and into the paranoid character types which we shall discuss in Chap. XX, on the other. Since the paranoiac has only one symptom, namely, a set of highly systematized delusions, he furthermore does not always need to be hospitalized. Actually, the world is full of paranoid individuals, crackpots, people who are "crazy" about some pet idea, misunderstood geniuses, inventors of perpetual movement machines, and the like. Only the psychiatrist, and not always he, recognizes these individuals as mentally ill.

These individuals furthermore only have to be hospitalized when their delusions of persecution drive them into antisocial acts.

3. **Symptomatology.**—The chief, and in some cases the only, symptom is a highly systematized set of delusions. Hallucinations are absent or very rare. The conduct and emotions are such that they either hide the delusions or fit in well with them. The delusions are those of being persecuted (by the state, the employer, the family, the wife, the children) or of grandeur (the inventor, the founder of new religious systems, the person of royal birth, the lover). These delusions are often balanced, as we saw in Chap. V.

4. **Differential Diagnosis.**—To the psychiatrist who has also factual knowledge about the field of the individual's belief, the diagnosis is simple. The delusions of persecution or the delusions of grandeur are always obvious under these circumstances. Knowledge of the laws of thermodynamics enables the psychiatrist to realize that an engineer who attempts to develop a perpetual motion machine is a paranoiac. Similarly, knowledge that the Pope is not persecuting an unknown fruit-stand operator marks the fruit-stand operator as a paranoiac, too. Although in the reported cases both delusions of grandeur and delusions of persecution are not always mentioned, there are theoretical reasons for believing that both are always present.

It is, in fact, this balancing effect of persecution on grandeur ("I am held back from realizing the fruits of my inventions by my enemies") or of grandeur on persecution ("I am really the king's son so I do not have to stoop to kill those who doubt me") which makes it possible for paranoiacs to continue for years undetected. This also has a balancing, stabilizing effect on the personality and makes the progress of the disease very slow.

5. **Etiology.**—There are no known or suspected organic factors in this disease; it is closely related to the psychoneuroses. From the standpoint of psychoanalytic theory, the etiology of the disease is quite well understood. True paranoia represents a regression to the early anal level of psychosexual genesis. It will be remembered that this is the level of reality testing. The individual suffering from paranoia does not completely break with reality and, as his psychosis develops, he develops a set of rationalized balancing delusions. This, of course, makes the disease particularly vicious, as he permits himself gratification of the infantile megalomaniacal (id) drives but corrects them by the delusions of persecution. The feeling of

megalomania, it will be remembered, was very strong in connection with anal productiveness at that time. The "productiveness" (inventions, genius, etc.) of the paranoiac comes from these infantile urges and hence his delusions of grandeur. His delusions of persecution come from two sources, both of them reaction formations against id drives which are unacceptable to the superego. It will be remembered that homosexual conflicts occur in the child at this period. Freud (1924*a*, Vol. III) pointed out in his discussion of the famous Schreber case that delusions of persecution represent a reversal and a reaction formation against homosexual impulses. Freud states that delusions of persecution, delusions of erotic potency, delusions of jealousy as well as feelings of megalomania may all be derived as reaction formations against the homosexual wish "I love him," which the conscious ego cannot accept. Thus the wish "I love him" is changed by reaction formation to "I hate him," which in turn being unacceptable is *projected* into the form of "He hates me and is persecuting me." Freud is able to show that the other paranoid delusions follow similar mechanisms.

Freud's development of the theory of paranoia occurred before his discovery of the importance of the aggressive urges. Undoubtedly the fear of the consequences of homosexual aggressivity also enter into the formation of paranoid delusions. Thus Knight (1940) in an important recent paper shows that fear of the consequences of aggression "I hate him and wish to destroy him" is projected on the hate object, and "He hates me and wishes to destroy me" adds to the severity of the persecutory delusion.

All individuals have homosexual strivings, however, and we do not yet understand exactly the predisposing factors to paranoia. Paranoid individuals are narcissistic and conceited persons who, because of strong superegos, feel impelled to make a strong masculine protest against homosexuality. Paranoid individuals also are markedly aggressive but their superegos do not allow admission of these aggressions. The incidence of hospitalized cases of paranoia alone would not warrant the treatment we have given the disease. It is quite likely that certain social factors, such as the prestige motive, play a strong role in paranoid character development, and it is also likely that our present severely competitive society may increase paranoia. It is certain that, in this amazing culture in which we live, some of the most powerful single individuals, such as the European dictators, show definite paranoid characteristics.

6. Therapy.—No successful therapy has been discovered for paranoia. This is undoubtedly because of the nature of the disease. The psychotic suffers because he is not able to rationalize his position, the neurotic because he has insight and anxiety. The paranoiac falls between the two. He also suffers but he projects guilt and blame. It is the other fellow who is the devil. Suffering in righteousness is not so bad.

5. Other Psychoses Primarily Functional in Nature

Practically all the psychoses due to primarily functional disorders fit into the categories of schizophrenia, the manic-depressive psychoses, and paranoia. It is, in fact, sometimes difficult to distinguish between these disorders and very often it is necessary to diagnose a given case as schizophrenia with cycloid coloring or as a manic-depressive psychosis with schizoid symptoms. There are several other psychoses which are closely related to the diseases already treated but which show slightly different symptomatology and more or less a specific etiology so that psychiatrists have further differentiated them.

By a situational psychosis we mean in general a psychotic reaction to an environmental situation which is unbearable for the personality. The prognosis in all situational psychoses is on the whole better than in the endogenous psychoses because reconstruction of the objective situation removes the necessity for flight into mental disease. The most frequent of the situational psychoses is the reactive depression. These are deep depressions following some severe emotional shock. It is, of course, impossible to draw a strict dividing line between endogenous psychoses and reactive ones. In endogenous psychoses there is always some precipitating factor and in reactive psychoses we must presuppose some premorbid character weakness. After all, many individuals go through the most excruciatingly painful emotional and social experiences without becoming psychotic and others become psychotic for what seem to outsiders very trivial reasons. In general, one can say that the true situational or reactive psychoses are quite rare but they undoubtedly do occur. Interestingly enough, in the layman's picture of psychosis situational psychoses occur rather frequently, but this is only because the layman is inclined to overestimate the importance of the precipitating factor and have little insight into the endogenous factors. That some psychotics recover immediately upon a change in the objective social

situation does indicate that reactive psychoses sometimes occur. The distinction is psychiatrically important because of the extremely good prognosis for reactive psychoses. If one has good reasons to believe that the premorbid personality was well adjusted and the precipitating factors seem very severe to the normal individual, one is justified in diagnosing these psychoses as reactive.

Another form of psychosis closely connected to the manic-depressive psychosis but differing from it in one respect is *involutional melancholia*. Involutional melancholia is characterized by one long agitated depression following on or directly preceding the diminishment in sexual activity. It is much more frequent in women than in men and in women invariably connected with the phenomenon of the menopause. In general, the symptomatology closely parallels that of the agitated depression. Rarer are *involutional paranoias* (or paraphrenias), which are more frequent in males. The symptomatology is similar to that of paranoia but usually subsides with the ending of the involutional period. Both forms of involutional psychoses account for about 2.9 per cent of the first admissions. The prognosis is good for final recovery unless, as often occurs, the melancholic individual takes his own life or medical complications arise so that the death is due to physiological causes. Because of the peculiar time of the original manifestation of the disease, because of its occurring only once, because of the prognosis, it is useful to differentiate the involutional psychoses from the related functional forms.

Bibliographical Note

Important for schizophrenia are Jung (1909), Hoch, the Handbook of the Association for Research in the Nervous and Mental Diseases, Lewis. Freud's articles on the unconscious and narcissism (1924*a*, Vols. II, IV) are also important. Tausk's article on the influencing machine is pertinent here.

For the manic-depressive psychoses, see the papers of Abraham (1927), Freud (1924*a*, Vol. IV) and H. Deutsch (1933). The Handbook of the Association for Research in Nervous and Mental Diseases is valuable.

For paranoia, the case of Schreber as reported by Freud (1924*a*, Vol. III) is very important. Freud's other writings on the subject include several papers (1924*a*, Vols. I, II). *Cf.* also Ruth Brunswick (1928).

CHAPTER XVII

THE BORDERLINE DISEASES

1. The Scope of This Chapter

This chapter will deal with a group of diseases which offer frequent and important problems to the psychiatrist but which for one reason or another cannot be integrated into our main classificatory scheme. This, it will be remembered, was to make a double classification, first, on the basis of etiological factors, organic or functional, and, second, on the basis of the nature of the personality restructurization in the sickness. Such a treatment is impossible for the diseases to be discussed in this chapter because our conception of them has undergone considerable change in the last few years. In this chapter we shall discuss hypophrenia, epilepsy, the mental diseases of senility, and the pathoneuroses.

Feeble-mindedness or hypophrenia is one of the main problems which students of psychology and psychiatrists are expected to know something about. Twenty years ago we believed that hypophrenia was always and definitely organic and hereditary. In this way, depending on its severity, it was looked on as the equivalent (without parasymptomatology) of the organic psychoses or neuroses. Just as the organic psychoses are considered to be due to destruction of the brain occurring during the lifetime of the individual, hypophrenia was considered to be due to deficiency in cerebral development arising on a purely hereditary basis. Most laymen still think it to be such. Psychologists know today that environmental factors account for at least half and sometimes perhaps even more than half of a person's I.Q. Psychotherapy sometimes raises I.Q.'s by as much as 30 points, and many cases of hypophrenia may be considered as neuroses where the ego is not sufficiently developed.

A similar state of affairs exists in epilepsy. Twenty years ago epilepsy was considered a definite organic disease which might or might not have secondary psychological or characterological symptomatology. Twenty years ago—it was the mode then, of course, to account for nearly everything in the personality as due to heredity

—epilepsy was considered a purely hereditary disease. Today we know that some cases of epilepsy are undoubtedly organic and may even be hereditary but others, and perhaps they are just as frequent, occur on a primarily functional basis. Furthermore there are psychological and characterological problems in the "organic" types and organic problems in the "functional" types.

We all have observed the disastrous effects of old age on the psychological abilities of dear relatives. It is relatively uncommon these days for someone to die at the height of his mental powers. Our previous belief was that the brain grew old and weak like the body and so senility was accounted for. Today, in some forms of senility, the presence of a primarily organic etiology is recognized but it is also recognized that functional factors enter into all senility. Also it may be sensible to compare the milder forms of senility to neuroses or character defects rather than to psychoses as was always done in the past.

Another great group of diseases which have baffled the medical profession for years are the so-called pathoneuroses and organ neuroses. The symptomatology of these diseases is almost purely organic but today we realize there are also heavy determinants in them of a psychological nature. Even those organic diseases which are usually treated exclusively by internal medicine have been shown to raise important psychological problems.

All the above-mentioned diseases are customarily treated as entities in medical practice and we must follow this practice here. Actually they probably are not entities in either the etiological or the person-structure sense. Very likely in another twenty years some of the hypophrenias will be classified with the organic psychoses, some with the functional psychoses, and some with the neuroses. Similarly some of the epilepsies will be treated purely medically and some mainly psychologically. But until this time we must follow the ordinary psychiatric usage.

Our description may be briefer in the cases of these diseases because although they all represent psychiatrical problems, they are also problems for other specialists as well. Custodians of old people's homes actually have more interest in and understanding of senility than psychiatrists. Educational psychologists have studied hypophrenia more intensively and extensively than have psychiatrists. Epilepsy and the pathoneuroses have, until recently at least, been more the concern of the medical man than the psychologist.

2. Hypophrenia

Hypophrenia or, as it is more commonly called, *amentia*[1] refers to deficiency in intellection. Amentia means literally "without mind," and, as our modern conception of mind is so broad that even the "blithering idiot" must have some of it, hypophrenia is the more accurate description. That humans vary in intelligence has been observed for as long as we have written records. Intelligence itself is a hard concept to define and undoubtedly means different things to different people. One of the chief contributions of academic psychology to the science of human behavior has been in the development of the intelligence tests. Psychologists perhaps can most adequately define intelligence as that capacity which intelligence tests measure. From an analysis of the behavior shown in intelligence tests, intelligent behavior is behavior which succeeds in overcoming barriers toward conceptual goals. In other words, the more intelligent individual is the individual who can solve problems of the sort given in an intelligence test more accurately and rapidly than the less intelligent individual. Since ability to solve this type of simple problem is highly correlated with success in education and the professions, intelligence tests may be used to predict capacities to learn and produce. Individuals who cannot learn and produce become misfits, particularly in our very competitive society, and so the degree of hypophrenia may be correlated with the poorness of performance on the intelligence tests.

1. Name of the Disease and History of Its Differentiation.—Although the concept of feeble-mindedness, with its subforms of the idiot, imbecile, and the moron, was used clinically before the development of the tests, the study of hypophrenia was given a new status by them. This occurred in the first decades of the present century.[2]

The problem of intelligence tests and intelligence testing cannot be enlarged on here. This is a special branch of experimental psychology to which whole college courses and lengthy textbooks are devoted. Most readers will remember the chief terminology and concepts from elementary psychology courses. For review purposes Table 8 gives the actual distribution of intelligence quotients for a group of school children and a definition of some of the most fre-

[1] Amentia is used by English psychiatrists and psychologists in this sense but not by American psychiatrists.

[2] *Cf.* A. Deutsch (1937), Pintner.

quently used terms. The theoretical distribution of course is that of the normal probability curve.

TABLE 8.—THE DISTRIBUTION OF INTELLIGENCE AND DEFINITION OF SOME COMMON TERMS

I.Q.	Designation	Percentage
Above 140...	Near genius or genius	3
120 to 139.....	Very superior intelligence	14
110 to 119..	Superior intelligence	20
90 to 109.....	Normal or average intelligence	45
80 to 89.	Dullness	12
70 to 79...	Borderline deficiency	5
Below 70.....	Definite feeble-mindedness	1

Moron: mental age, 8 through 12.
Imbecile: Mental age, 4 through 7.
Idiot: mental age, 0 through 3.

2. Incidence.—Estimations of the number of mentally defective individuals vary widely. Bleuler for Germany estimates that only 0.1 per cent of the population are mentally defective, while very alarmist American psychologists at the time of the World War draft estimated that nearly 50 per cent of our population was so afflicted. These extreme differences in incidence arise because intelligence is normally distributed and measured along a continuum. The dividing line between mentally adequate and mentally deficient is highly arbitrary. Where this shall be put is undoubtedly determined to a large extent by the nature of the culture and is thus a sociological problem. An I.Q. which might be quite adequate in a primitive rural community would be quite inadequate for a civilized urban one. The best American practice classifies as definitely deficient subjects with an I.Q. of 70 or below, and considers as borderline cases those whose I.Q.'s range from 70 to 80. On this basis about 2 per cent of the American population is mentally deficient and about 6 per cent should have special types of schooling to allow them to succeed in the less exacting and more menial positions.

When intelligence was considered almost solely a matter of personal heredity, a vast accumulation of statistical data was used to point out differences in intelligence in the various social classes, races, and professions. Today, although the results of the intelligence tests continue to show such differences, these results are probably

conditioned not solely biologically but also sociologically. In other words, although the rich are smarter than the poor, their greater intelligence comes probably as much from the environment which riches provide as does the wealth from the superior biological virtues of the rich.

3. **Symptomatology.**—Hypophrenia may be considered a monosymptomatic disease of a varied range of severity. The intellectual functions are so important in man and cover so many activities that the disease furnishes very widely differing symptom pictures. The symptomatology is further complicated by the fact that our recent knowledge of the unconscious motivational factors in all behavior raises problems of emotional and motor symptoms. Intelligence follows the normal probability curve so that the more severe forms are relatively less frequent. In *idiocy* the intellectual functions do not exceed those of a three-year-old child. The individual thus needs complete custodial care and is unable even to speak properly and take care of his own physical hygiene. The *imbecile's* intellectual capacities range between those of the four- and those of the seven-year-old child, his spoken language is developed but inadequately, and he is able to take care of himself under supervision but unable to do any productive act requiring personal initiative. The *moron*, ranging in mental age from seven to twelve, often escapes immediate detection. His language ability, both spoken and written, is totally inadequate to adult adjustment but sometimes adequate for social intercourse. He is able to care for himself and is able to hold for a time, at least, simple positions that do not require mature judgment. Many of the individuals who hold the menial and routine positions (household domestics, waitresses, filling-station attendants, theater ushers, and the like) are relatively high-grade morons.

The hypophrenic invariably develops emotional symptoms because of the frequency and the severity of his frustrations. These often lead to psychosis or to borderline psychotic conditions of a schizoid sort. There is certainly no clear division between dementia praecox, simple form, and hypophrenia with schizoid coloring.

With the exception of the clinical idiocies, of which we shall speak next, hypophrenia of the higher grades is by no means obvious on the first observation. Idiots and imbeciles of course soon give themselves away, but high-grade morons often struggle, or are made by their parents to struggle, for years, and finally fail to obtain their

goals. In these cases properly administered intelligence tests would avoid much suffering. The writer has often found high-grade morons cheerfully but futilely attempting to pursue a college education after just getting by in high school. There are many things which morons can do, but going through college is not one of them. In a moment, however, we shall see that some hypophrenia is undoubtedly a form of neurosis which can be treated psychotherapeutically. This statement is hence not to be taken to mean that once a person fails an intelligence test he is forever doomed to limited accomplishment.

Much rarer (accounting for not more than 10 per cent of the total number of hypophrenias) are the hypophrenias showing definite organic secondary symptoms. In this book we can do no more than list them.

Microcephaly refers to the extremely small-headed who, although spread through the range of mental deficiency, are usually imbeciles. *Hydrocephaly* refers to individuals who have excessive amounts of cerebrospinal fluid in the cranium. The pressure resulting from the excess fluid prevents proper brain development. Hydrocephalics range in intelligence from idiots to morons. *Macrocephaly* refers to large-headedness. This is usually due to hypertrophy of glia cells. *Mongolism* and *amaurotic* family idiocy are two rare and congenital types of feeble-mindedness.[1]

4. **Differential Diagnosis.**—Hypophrenia is differentially diagnosed by a low I.Q. and usually no marked psychotic symptoms.

5. **Etiology.**—We have already indicated that until recently intelligence was a supposedly purely hereditary mental trait. More recent researches[2] make us suppose that environmental factors account for about one-half of the person's I.Q. Undoubtedly the inherited constitutional nervous system must be looked on as a limiting factor in the development of every individual's intelligence. On the other hand, the environment furnishes the chief stimuli for this development and intelligence depends equally on the richness of the environment. When we speak of the "average" individual in the above lines we do not imply that every individual intelligence is half determined by environmental factors, but rather that in every individual both hereditary and environmental factors are at work

[1] For more specific information on organic hypophrenia the reader may consult Treadgold or Penrose.

[2] *Cf.* the general discussion of heredity versus environment in Chap. I.

and that these are differently distributed. There is no one, except those idiots whose powers of perceiving changes in environment are almost lacking, whose intelligence is not somewhat improved by a more favorable environment. This is generally realized today and even Rosanoff, who has always held rather strongly to the hereditary etiological theory, states now "that scarcely more than one-half of the cases [of hypophrenia] are hereditary in origin." Our own viewpoint here, as throughout the book, is that both organic and functional etiological factors are involved but these vary so in the individual case that we must classify hypophrenia as a borderline disease.

There are, however, some cases of hypophrenia where the deficiency is not great and where the disease can be considered primarily psychogenic in origin. In these individuals the integrating function of the ego—and this is what intelligence really amounts to—is not properly developed because of infantile anxiety. These forms of hypophrenia really belong to the neuroses, which we shall consider in the next chapter.

6. **Therapy.**—When the hereditary factors are the most determinant, of course, the only possible therapy is custodial care and ameliorative physical therapy. In the cases where environmental factors are demonstrably present reeducation with psychotherapy can accomplish much. In those cases of neurotic origin, psychoanalysis is the definite treatment of choice. There is an increasing literature on the psychogenic factors in hypophrenia, which will be referred to in the bibliographical note appended to this chapter.

3. Senile Psychoses

1. **Name of the Disease and History of Its Differentiation.**—We have just seen how some of us are born deficient in intellectual function; all of us who live to old age become deficient in it. As measured by intelligence tests intellectual capacity reaches its height around twenty years of age and then begins very gradually to fall until around sixty, whereupon its fall becomes much more rapid. In old people the memory fails, the ability to solve new problems diminishes ("you can't teach an old dog new tricks") the adaptive plasticity of youth is gone forever ("they are set in their ways"). Very few individuals go through senescence without the development of some maladjustments, and the border line between normal senility, which

is outside the province of psychiatry, and the senile psychoses and neuroses, which lie within it, is a narrow one and ill defined.

The existence of senility and the senile psychoses has, of course, been known since the ancients. The development of the classificatory scheme we use for them today is largely the work of Kraepelin and nineteenth century German psychology. In general, the senile psychoses are distinguished from normal senility on the basis of definite conflicts between the ego and reality which occur in the senile psychoses.

2. Incidence.—Senile psychoses account for 18 per cent of the first admissions to mental hospitals. Of these 8 per cent are simple senile dementias (where organic manifestations may or may not be present) and 10 per cent are due to cerebral arteriosclerosis, where there is definite hardening of the cerebral arteries and a resultant brain anemia. The senile psychoses account for only 8 per cent of the resident population. The reason for this is, of course, the high death rate, since the age of most frequent admission is past sixty. The disease is slightly more frequent in males than in females. This is perhaps strange, as the female life expectancy is greater than the male. It is probably accounted for by the fact that in our culture males, being the dominant sex, are most incapacitated by mental illness. The senile psychoses are undoubtedly increasing sharply in frequency. This fact is not too surprising, however, when one considers the increasing life expectancy and the change from a primarily rural agricultural to an urban industrial civilization. The senile grandmother on the farm, like the village idiot, sat by the fire and bothered no one, but the senile apartment-house dweller is likely to make trouble.

3. Symptomatology.—In senile dementia, which may be considered an exaggeration of normal senility, where the intellectual deterioration of normal senility is accelerated, there is general imperception, sometimes hallucinations, and always a circumstantiality and dearth of ideas in association. The memory shows amnesia, particularly of the retrograde sort, and new impressions are not reliably stored. Delusions particularly of a paranoid sort may be present. In the emotional sphere there is irritability and sometimes exaggerated libido but usually with impotence. In conduct the seniles are often quarrelsome and complaining. There is usually some tremor, muscular weakness, and exaggeration of the reflexes.

Cerebral arteriosclerosis shows all the symptoms of the senile psychosis and drowsiness, headaches, fatigability. In the end state of the disease epileptiform seizures and apoplectic strokes are common.

4. Differential Diagnosis.—The differential diagnosis is usually simple. The disease is one of old age where the past history may show relative normality. The prevalence of paranoid and other delusional ideas and the extreme confusion sometimes make it hard to differentiate from schizophrenia. The obvious signs of deterioration and associational difficulties and the presence of neurological signs make a mistaken first diagnosis of paresis not uncommon. The differentiation from paresis is, of course, on the basis of laboratory tests. In cerebral arteriosclerosis the secondary neurological signs and history of hypertension and arteriosclerosis usually allow differentiation from schizophrenia. In simple senile dementia the differentiation is not so easy but may usually be made on the basis of age.

5. Etiology.—This is again, of course, a borderline disease. Cerebral arteriosclerosis has as definite an organic pathology as does paresis, but as in the case of paresis psychic factors are of importance.

Senile dementia without outstanding organic pathology may be understood psychoanalytically as due to the failure of the erotic urges to neutralize the destructive urges, so that senile dementia develops. Here a vicious circle is instituted which in itself leads to nervous degeneration. The old person who has gone through youth and middle age fairly successfully has given his erotic impulses every outlet which society allows. The pleasures to be had from further living are not worth the further frustrations which further living demands. In these individuals the wish to die becomes the unconscious father of the wish to withdraw from the social struggle.

6. Therapy.—Since the senile psychoses occur in old age and usually end in death, their treatment has not yet been extensively studied. Custodial care with palliative and ameliorative physical and medicinal therapy is, of course, of some advantage. In those case where arteriosclerosis and hypertension are present medical treatment of these organic etiological factors undoubtedly helps. Those cases where the psychogenic factors are very important respond favorably to psychoanalytic psychotherapy and suggestion. Naturally here cures are not effected, but the patient is made more content and comfortable by psychotherapy.

4. Epilepsy

1. Name of the Disease and History of Its Differentiation.—Epilepsy is another disease with a long medical history. Caesar is supposed to have had it, as is Alexander the Great. In the Middle Ages epileptics were often considered the chosen of God and the epileptic seizure or fit was much admired. Naturally this led to imitation, and there were epidemics of hysterical convulsions. More recently Napoleon is supposed to have been epileptic. Hitler, it is said, goes into rages which are epileptoid in nature. It has long been realized that many epileptics show no specific mental symptoms besides their convulsions, while others show definite mental symptoms and some others show definite characterological problems.

The nineteenth century saw the development of the concept of epilepsy as we know it today and in the twentieth century a great deal of work has been done on this as yet unsolved medical problem. For this reason we consider it a borderline problem because neither the etiology nor the relation of epilepsy to psychiatry is wholly clear.

2. Incidence.—It is hard to estimate the number of epileptics for several reasons. Many, in fact, probably most epileptics, suffer mild forms of the disease which do not require hospitalization. Of those who are hospitalized, some are in state hospitals for the insane, some are in homes for the feeble-minded (because many epileptics are also mentally defective), some are in private hospitals, and some are in special hospitals for epileptics. This last type of care is the most favored, as epilepsy represents a rather severe disease which is fairly monosymptomatic, *i.e.*, the recurrent epileptic seizures alone need special treatment. In 1933 there were over 17,000 epileptics hospitalized in epileptic hospitals and state hospitals for the insane. Thus, not counting those in private hospitals, homes for the mentally defective, and at large, about 1 person in every 65,000 citizens is an epileptic. If those not hospitalized were included, the figure would be much larger. Epilepsy is by no means a rare disease. In fact, nearly everyone has seen an epileptic seizure on the streets or in stores.

Epilepsy occurs usually in the young. Over 75 per cent, according to Bridges, have their first attacks before twenty. It is more frequent (some authors estimate as much as 2 to 1) in males than in females. Statistics on its frequency with regard to social class, race, and other factors are probably highly unreliable. It is proved,

however, that epileptics have lower intelligence than normal groups and that they are more frequently psychotic.

3. **Symptomatology.**—Epilepsy is characterized by recurrent paroxysms, which are variable in duration and are accompanied by loss of consciousness or at least its impairment and loss or impairment of motor coordination. There may or may not be convulsions. The immediate precursor of the epileptic attack is the *aura* or "warning." This consists of photomata or akoasms, giddiness, feelings of fear and sometimes of ecstasy, and increased vividness of imagination.

The aura is usually followed by the convulsion, which in the *grand mal* attack consists of a tonic stage with vigorous contraction of muscles, followed by a clonic stage, in which there is rhythmic relaxation and contraction. This in turn is followed by a coma, in which there is complete relaxation and often sleep. *Petit mal* represents an incomplete or abortive attack. There is a mild muscular disturbance but the patient rarely falls. Consciousness is momentarily lost or clouded. Furthermore, it is well known that certain of the specific compulsions like pyromania, dipsomania, and kleptomania are epileptic equivalents. By an epileptic equivalent is meant a behavior which when indulged in will ward off an epileptic seizure.

4. **Differential Diagnosis.**—This is, of course, very easy. It is never made unless there is a history of recurrent grand mal or petit mal attacks. The problems of differential diagnosis become difficult when the disease is associated with a psychosis or hypophrenia. Should one speak of psychosis with epilepsy, or vice versa? There are, of course, some cases where one disease predominates the picture. In others the best practice here is simply to make a double diagnosis. There is no reason why individuals should not have two or more mental diseases at the same time any more than that they should not have two or more organic diseases.

5. **Etiology.**—Some epilepsy is undoubtedly definitely organic in origin and comes from increased intracranial pressure or other physiological cause. Such brain pathology is probably most frequent in the grand mal attacks. That some epilepsy is of organic origin can most clearly be illustrated by the fact that epileptoid seizures, which are almost exactly like grand mal attacks, can be brought about in insulin and metrazol shock. These primarily organic seizures themselves raise psychological problems but remain principally in the province of neurology and neurosurgery.

In the case of essential or idiopathic epilepsy the psychological factors are of greater importance. Earlier studies linked epilepsy with heredity but these were inadequately controlled. Even Rosanoff, a conservative psychiatrist, whose position is usually organic, admits in the latest edition of his handbook that there is no evidence for insisting on hereditary factors in epilepsy. This viewpoint is encouraging because for many years epileptics have found the bogie of heredity a bar to marriage.

Psychoanalytic studies have shown the possibility that epileptic seizures often represent hysterical convulsions, where the seizure itself represents the acting out of infantile sex wishes. The exact theory of this will concern us in the next chapter. In these seizures strongly dammed-up emotions obtain outlet. That these emotions are often aggressive and self-destructive accounts for the destructive aspects of the convulsion. It is known that sexual excitation with erection and orgasm often occur in the epileptic seizure.

6. Therapy.—There are various physical therapies, special diets, and sedative drugs for the control of epilepsy which lie within the field of neurological medicine. These may be used with all epileptics and are all that we can do for organic epilepsy. Psychotherapy can do much to make the disease more bearable and to prepare the patient to deal with the actual seizure. Psychoanalytic psychotherapy has effected improvement and even cures where the epilepsy arises on primarily psychological grounds.

5. Pathoneuroses and Organ Neuroses

We come finally to a group of sicknesses with which we definitely cross the border into the field of internal medicine. The most recent developments in medicine and in many ways the most important are in the field of psychosomatic medicine. Psychosomatic medicine comes from a consequential development of the organismic hypothesis. Since the organismic viewpoint sees both a physiological and a psychological problem in every piece of behavior, physical illness must also show psychological problems. In studying these we have moved from the nineteenth century viewpoint that all behavior is to be accounted for in terms of biophysics, biochemistry, and pathology, through the early twentieth century viewpoint that some mental diseases are purely psychogenic, to the position of psychosomatic medicine that psychological factors enter into even "organic" diseases.

For many years it has been recognized that "organic" sickness changes psychological reactions. With a mere cold one becomes more narcissistic and concerned with one's self, and with a severe disease like tuberculosis there is developed a definite psychological picture which is well known to physicians.[1] In Table 9 the usual psychological mood of some common organic diseases is indicated. The important fact to remember is that narcissism is increased in all disease.

TABLE 9.—PSYCHOLOGICAL MOODS ASSOCIATED WITH VARIOUS PHYSICAL ILLNESSES

Disease	Mood
Tuberculosis	Mild euphoria, optimism, increased libido.
Diabetes	Depression, melancholia, delusions, somnolence, coma.
Cardiac disorders	Depression, melancholia, anxiety.
Gastrointestinal disorders	Irritability, depression, nervousness.

Once this psychological mood has arisen it may itself work back on the somatic field and a vicious circle be thus established. Ferenczi (1916) first established the conception of the pathoneuroses as sicknesses of originally "organic" origin, which become "functional" when the libido is directed to a greater than normal degree on the sick organ. From this conception he was able to deduce many of the psychological factors. In a pathoneurosis, a sick (in this sense physically sick) organ receives the attention of the whole libido, this withdrawal of libido from the outside world increases the individual's sickness, and the vicious circle is established. His concern with himself gives rise to definitely neurotic symptoms. Here we have "neurotic" symptoms originating on a "physical" basis. In Chap. XVIII, when we discuss conversion hysteria, we shall see "physical" symptoms arising on a "neurotic" basis.

Psychological factors enter into the recovery process of many if not all organic illnesses. The *pathoneuroses* refer chiefly to the effect of unconsciously cathecting sick organs. In the *organ neuroses* we have the disturbance of vegetative organs, caused by nerve impulses the ultimate origin of which are emotional processes. These "functional" disturbances of digestion, respiration, circulation, elimination, and other physiological functions have been known

[1] In his remarkable novel *The Magic Mountain*, Thomas Mann has given us a classic picture of the psychology of tuberculosis.

to be medical problems for some time. But no specific organic pathology has been discovered and medical therapy could only be of a palliative nature. The organ neurosis is the end result of psychological conflict in many cases and can only be cured by removing the conflict. Thus today we know that many cardiac disorders like functional tachycardia, many circulatory disorders like hypertension, many respiratory disorders like asthma, and many digestive disorders like peptic ulcer may be organ neuroses. Organ neuroses of long standing, of course, bring about changes in cellular pathology and the problem, like that of the pathoneuroses, becomes a double-barreled one. Illness which starts as an emotional upset may end in being a problem for surgery, and illness which starts in definite infection may end in being a problem for psychoanalysis. But we are already past the boundary and in the field of internal medicine. This is a book by a psychologist for students wishing to learn psychodynamics, so we must return to our own field. This brief discussion of some of the problems of psychosomatic medicine can be supplemented by reading the interesting works of Alexander (1936), Dunbar (1935), and Menninger (1938) in this field.

Bibliographical Note

Standard works on hypophrenia as a psychiatric problem are those of Treadgold and Penrose. Feeble-mindedness as an ego neurosis is treated with a review of the literature by Chidester. The viewpoint that intelligence is partially environmentally conditioned is that of Stoddard and Wheeler (1940). The whole problem of old age has recently been covered in a handbook edited by Cowdry. Grotjahn (1940) reports the psychoanalysis of a senile male. Epilepsy has been treated in Spratling. The psychological factors in epilepsy are stressed by Clark.

CHAPTER XVIII

THE PSYCHONEUROSES

1. The Differentiae of Psychoneurosis

By psychoneurosis we mean the milder abnormalities of the cognitive, emotional, and motor processes, which usually only partially incapacitate the individual and where the basic symptoms are somehow connected with anxiety. Psychoneurotics are individuals who because of their conscious or unconscious conflicts are prevented from arriving at the accomplishments of a productive sort which would normally be expected of them in consideration of their abilities and culture. Some psychoses are primarily organic. Even in the functional psychoses, organic factors enter into the etiology. The psychoneuroses on the other hand are predominantly socially conditioned. Thus Karen Horney (1937) and others have pointed out that many reactions which we should look on as neurotic in our culture are considered quite normal in other cultures, and behavior types which we consider quite usual would be considered neurotic at some times and in some places. The psychoneurotic, then, is the individual who deviates in his behavior from the norms accepted by his culture because of anxiety and who feels lonely and inferior because of this deviation. Psychoneuroses may be subdivided into relatively distinct syndromes, and our description of the psychoneurotic as a type is for comparison with the psychotic and normal types we have already described.

There is no sharp break, furthermore, between behavior which is to be looked on as psychotic and behavior which is to be looked on as neurotic. The two classifications merge into one another so that it is almost impossible to classify certain diseases definitely in either category, and we must speak of borderline psychotics and borderline neurotics. Let us take one or two examples to illustrate this difficulty. We have already referred to a woman whose daughter had become engaged to a young man of the Protestant faith (page 105). This woman previously had not been a particularly religious person and was only an occasional churchgoer. At the

time of her daughter's engagement, her whole behavior changed. She began to go to church very regularly, to go regularly to confession to her own priest, and to become obsessed with the fear that her daughter and her daughter's children would suffer the fires of hell because of the prospective son-in-law's membership in the Protestant church. Her own priest tried to argue her out of this. He pointed out that although a marriage to a Catholic would have been better in his eyes, still in the eyes of God there was no reason why the daughter or the children should really suffer or why the marriage should be unhappy. The woman persisted in this belief and was made very unhappy and anxious and was incapacitated in her functions both as wife and mother because of it. Where the psychiatrist finds difficulty is in classifying such disturbances of the cognitive processes. Are they delusions or are they obsessions? In general, as we saw above, we think of an obsession as a persistent unwelcome belief which the individual realizes is fantastic. A delusion is a persistent false belief. The difficult question of diagnosis in the present case was to say whether the individual was suffering from a psychosis of the paranoid form or from a psychoneurosis of the obsession-compulsion form.

A university professor had always worked in a compulsive fashion. He had been forced by internal conflict of which he was at least partially conscious to turn out not less than ten research papers a year. This meant that he must devote all his spare time during the academic year to research. In addition, he was inhibited from doing any research during his summer holiday. He was neurotic because many times in the school year he would have liked to relax and enjoy himself a little bit, but his anxiety about not getting his program finished prevented him from so doing. Furthermore, often in the summer he was at a loss to know what to do with himself and very often would like to turn to his professional specialty, but here again anxiety prevented him from so doing. As long as his productive research was of a scholarly, scientific sort, he was to be classified as a compensated neurotic. If, in order to fulfill the demands he made upon himself, he developed irrational beliefs about which he published papers in a field where he had no competence, he would have gone over the borderline into psychosis. Even for the psychiatrist, it is difficult to say at just what time this occurs.

Another example, this time of a fear. Stage fright is a quite normal phenomenon which all of us experience at one time or

another in our lives. Normal stage fright may be said to occur when a person makes an appearance in a new role before an unfamiliar audience. Neurotic stage fright is the stage fright from which an individual might suffer in producing familiar material before either a familiar audience or the type of audience with which he has previously had at least moderate success. Psychotic stage fright may be said to occur when the individual is not afraid of failing before the group but is afraid that actually one of the audience is really persecuting him or embarrassing him or may even injure him. It should be quite obvious that it is almost impossible to draw a definite line between psychoses and psychoneuroses.

A psychoneurosis is at the same time a problem of individual psychology because of the anxiety and a problem of sociology because of the deviations in mentality and behavior from the cultural norm. All psychopathologic behaviors deviate from cultural norms and any definition of the psychopathologic implies this. Particularly important to psychoneuroses is, besides this deviation, the fact that psychoneurotics do not break with reality (*i.e.*, retain insight) and that they suffer anxiety. In his book, *The Problem of Anxiety* (1936), Freud has pointed out that neurotic anxiety represents a defense against the breakdown of repression and the return of the repressed to consciousness in its original form. The symptoms of psychoneurosis other than anxiety represent a return in disguised form.

The various criteria developed allow us to view psychoneurosis in terms of psychoanalytic theory. In psychoanalytic theory, the psychoses may be differentiated from the psychoneuroses in terms of the amount of ego and libido regression and in terms of the topographical location of the conflict. Thus in psychoses the libidinal regression goes at least as deep as the early anal period (beyond the level of reality testing). Psychosis thus may be considered dynamically as a disorder in which the ego loses much of its contact with reality and aligns itself with the forces of the id. The conflict is that of the ego plus the id versus reality. The psychoneurotic, on the other hand, suffers libidinal regression only to the phallic or late anal period, and his conflict may be considered a struggle between the forces of the id and the ego, in which the ego maintains its anchorage in external reality. The regression is only to the level of reality testing and so the neurotic retains insight and does not deny reality. The borderline cases, such as paranoia (a psychosis) and the obsessional compulsion neurosis (a psychoneurosis), are hence the most

difficult to distinguish. The paranoid individual has one part of the ego anchored to reality and another part taking the side of the id. The compulsive neurotic has more of the ego anchored to reality but still has a part which sides with the id. This state of affairs,

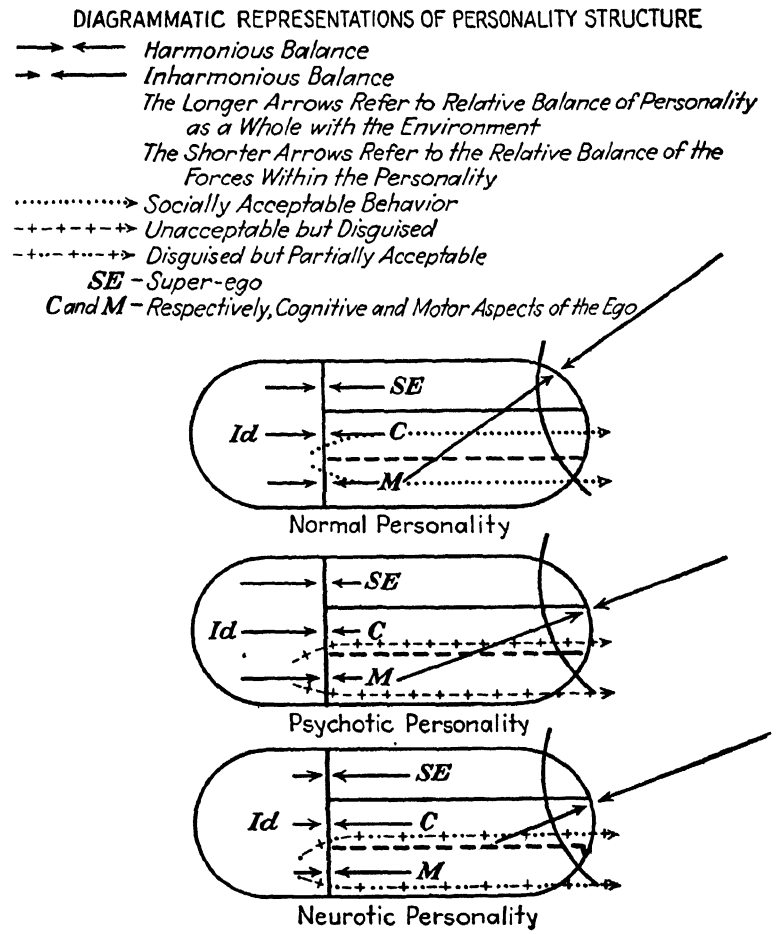


FIG. 11.—Comparing the neurotic personality with the other types.

we shall see, leads to the predominance of delusion in the paranoid individual and to the compulsive element in the abnormality of the compulsive neurotic. As we go down the regression scale from hysteria to schizophrenia (Table 2, page 206), we find an ever-increasing involvement of the ego on the side of the id. In hysteria, for

instance, the ego is relatively intact and unconscious id urges become converted into symptoms of physical disease. In schizophrenia, the ego accepts the disguised id urges almost *in toto*. The difference between psychosis and neurosis is an arbitrary one, but one which must be made for diagnostic and prognostic reasons. Table 10 and Fig. 11 show the schematic definition of psychoneurosis; to facilitate comparison, the personality structures already discussed are repeated.

TABLE 10

	Nature of internal conflict	Social nature of resultant behavior	Degree of regression	Relation of basic urges to love object	Resolution of conflict results in
Psychoneurosis	Inharmonious balance in ego, superego, id, and reality. Ego in conflict with superego and id but ego on side of reality	Behavior only partially acceptable. Destructive in both motor and cognitive spheres but id impulses checked	To late anal or phallic, thus not beyond the level of reality testing. (For individual diseases, *cf.* Table 2)	Ambivalent	Autoplastic symptoms, particularly anxiety
Normal	Harmonious balance between ego, superego, id, and outside reality	Behavior in all spheres constructive and socially acceptable	None, genital stage reached	Postambivalent. Some urges gratified, others sublimated	No conflict
Psychosis	Extremely inharmonious balance in ego, superego, id, and outside reality. Ego powerless or weak against id and breaks with reality. Superego projected or taken over by ego or oversevere	Socially unacceptable behavior in both motor and cognitive spheres. Id impulses break through in a disguised form	To at least the early anal; thus beyond the level of reality testing. (For individual diseases *cf.* Table 2)	Objectless or extremely ambivalent	Severe symptom formation in cognitive and motor spheres

2. THE SCOPE OF PSYCHONEUROTIC BEHAVIOR

It is almost impossible to get statistics on the extent of psychoneurotic disorders. Only about 4 per cent of institutionalized

patients in American mental hospitals are classified as psychoneurotic, and this might lead one to believe that psychoneurosis is a comparatively rare form of mental disease. How false this view is should be quite obvious from the differential criteria which we have outlined in the last paragraphs. Psychoneurosis is by no means rare; it is very common. The psychoneuroses are to the psychoses as the minor physical ailments, such as colds, headaches, stomachaches, indigestion, and diarrhea, are to major physical disease. These minor physical ailments do not call for hospitalization. The individual suffering from them often functions at least half efficiently in his economic and social milieu. But we have all had them and we know how thoroughly uncomfortable it is to try to do productive work with a cold or how thoroughly unpleasant it is to attend a social function with a racking headache. We all know how an attack of indigestion will ruin the enjoyment of even the most marvelously prepared meal. It is similar with the psychoneurotic disorders. The individual suffering from them rarely enjoys himself either at work or at play. A morbid fear of meeting new people will do even more to ruin what might be a pleasant social evening than a bad cold. A compulsion to wash one's hands or to urinate frequently may bring a person's professional or business efficiency down much more markedly than a severe headache.

Just as some of the minor physical ailments merge into what one might consider real sicknesses, so some psychoneuroses are much more severe than others. As some colds make life unhappy and force us to bed rather early, others force us to give up attempting to play our role at all in the economic and social world. In this the amount of the physical personality affected determines the depth of a physiological sickness. A common cold makes us simply uncomfortable. A grippe or influenza forces us to bed. A fear of high places might be a very minor thing to a person living in a small town on the plain, while it would be a very major thing to an individual living in the mountains or in a metropolis.

The psychoneuroses, then, rather than being rare, are very common and merge into the normal emotional reaction forms on the one hand and into deep psychoses on the other. Although no definite figures can be given, many psychologically minded general practitioners estimate that up to 50 per cent of their patients are neurotic. Former president Angell of Yale, himself a psychologist, estimates that at any given time 15 per cent of the American under-

graduate body is "neurotic." The author believes that the individual who never suffers psychoneurotic maladjustment is quite as rare as the individual who never has had colds. In this chapter we shall give examples of the various psychoneuroses, ranging from the obsessional neurosis which borders on psychosis in that the ego is involved on the side of the id to conversion hysteria which borders on normality in that the ego is left relatively intact.

3. The Nosology of Psychoneurosis

Psychoneurotic symptoms do not appear in such clean-cut syndromes as do the psychoses, so that many mixed neuroses occur. This makes nosological classification difficult. After the realization of the "psychogenic" nature of hysteria gave birth to the modern theories of psychopathology, it soon became obvious that there were many other psychoneurotic reaction forms. Nineteenth century pyschiatry followed the practice of the French school (Janet) in differentiating conversion hysteria, neurasthenia—which included nervousness, fatigability, irritability, and exhaustion without definite conversion symptoms or morbid fears and compulsions—and psychasthenia—which included morbid fears and compulsions. Actually the term "neurosis" itself is a misnomer, as it means disease or poisoning of the nerves. "Psychasthenia" means the weakening of the psyche and "neurasthenia," the weakening of the nerves. These terms were all introduced at the time in psychiatry when it was believed that some actual somatic changes or neuropathology would be discovered underlying the neuroses. The terms "psychoneurosis" and "neurosis," which are now used indiscriminately, will undoubtedly (despite their misleading etymological derivation) remain in the scientific language. "Psychasthenia" and "neurasthenia" are so inaccurate that they have been largely given up. Some psychiatric treatises still use them, so the student must be familiar with them.

Freud's work clarifies the genesis of psychoneurosis and gives us a basis for a dynamic classification of the neuroses. The neuroses like the psychoses are classified as to the depth of ego and libidinal regression and the nature of the conflict.

The psychoanalytic nosology divides the psychoneuroses with regard to etiology as well as with regard to regression. Before our detailed discussion of the neuroses on the basis of regression and personality structure, we must deal briefly with these categories.

The True Neuroses and the Psychoneuroses.—Freud, in his earlier papers (1924*a*, Vol. I) distinguished between neuroses which were caused by an existing nervous malfunction and those caused by infantile traumatic experiences. This distinction was made before the introduction of the aggressive or hostile basic urge and both forms of neurosis were considered due to libidinal maladjustment. The true neuroses occurred on the basis of adult sex maladjustment and included neurasthenia, which he attributed to sexual excesses, particularly masturbation, and the anxiety neurosis, which was supposedly due to sexual abstinence. The psychoneuroses include hysteria and the obsessional neuroses and are due to repressed infantile sex experiences, particularly in connection with the Oedipus situation. From Freud's conception of the psychoneuroses has grown the nosology we shall discuss in this chapter. Freud never modified his conception of the true neuroses and he never developed the concept further; in his later writings he spoke of it but occasionally. On the other hand, he has never withdrawn it. The prevalent psychiatric opinion is that, except in rare cases, both sexual excesses and sexual inhibitions are themselves neurotic symptoms and not causes of neurosis. Freud correctly perceived, however, that there are physiological problems even in the neuroses.

The Narcissistic and Transference Neuroses.—Psychoanalysts distinguish between narcissistic and transference neuroses. Transference neuroses are those in which the neurotic symptomatology is a disguised form of an originally cathected object relationship. Narcissistic neuroses are those where the libido is turned in. This distinction is important for the prediction of the possible therapeutic success of psychoanalysis. Transference neuroses, like conversion hysteria and anxiety hysteria, are much more easily cured by psychoanalysis. Neuroses like the obsessional neurosis are much less easily cured because of the narcissistic fixation of the libido. On Table 2 (page 204), the psychoneuroses are characterized in terms of the depth of neurotic regression. Actually, there is considerable overlap between the theoretical stages of the psychoneuroses and their actual symptomatology. Indeed, frequent strict diagnosis is almost impossible. It is, for instance, rare to find an obsessional neurotic without compulsions or, for that matter, an anxiety hysteric without obsessions.

As we go from the obsessional neurosis to conversion hysteria, certain differences become quite clear. The obsessional neurotic is obviously mentally ill. In fact in some cases we cannot clearly differentiate between obsession and delusion. The hysteric, on the other hand, is "physically ill." This means that the ego in hysteria is relatively little affected in its contact with reality, while in the obsessional neurosis the ego is deeply involved. The intermediate forms fall between. The deeper the regression, the more obvious the ambivalence of the behavior and the more infantile the libidinal adjustments. Hysterical individuals are maladjusted chiefly at the phallic level, *i.e.*, the level where ambivalence is becoming overcome, while compulsion neurotics show definite signs of ambivalence and late anal character traits. Thus the more regressed forms approach the psychotic and the less regressed forms approach the normal. This will be clear in a discussion of the symptomatology and etiology of the various neuroses.

The nosology of the psychoneuroses is of recent origin and there are no accurate statistical figures on their incidence. In most cases, psychoanalysis is the therapy of choice. For these reasons, we may shorten our outline and discuss only the symptomatology and etiology of the neuroses.

4. The Obsessional Neuroses

Symptomatology.—In actual practice, the obsessional neuroses cannot be strictly separated from the compulsion neuroses. Where obsessions predominate, compulsive behavior is almost always also present, and in compulsion neuroses obsessional fears and doubts are also to be found. To illustrate certain points of theory we shall speak of the obsessional neurosis when obsessions dominate the picture, the obsessional-compulsion neurosis when obsessions and compulsions are balanced and the compulsion neurosis when compulsions dominate. If obsessions predominate, in general the disease is more severe (*i.e.*, more deeply regressive and closer to psychosis) than in cases where compulsions predominate. This illustrates an important point about modern psychiatry, which should be clear from the foregoing chapters. The various disease entities represent arbitrary points chosen for diagnostic convenience on a continuum. Mental disease, in general, represents regression and retreat from reality along a continuous scale.

The outstanding symptoms in the obsessional neurosis are the obsessions. These are persistent unwelcome ideas which the patient realizes are morbid but which continue to bother him. These ideas are both self-accusatory and accusatory toward others and may be very close to paranoid delusions. A young mechanic suddenly gets the idea that he is not the father of the eight-year-old daughter he has always adored. This leads to the obsession that his wife is unfaithful. A young matron is obsessed with the idea she will poison her guests and plunge a carving knife into her husband. Another that she will pick up a hideous disease by touching any graniteware surface. Sometimes the obsessions are metaphysical. Religious individuals become obsessed with fear of hell fire or that the world is coming to an end. These obsessions are related to phobias, but in the obsessional neurosis the fear persists constantly. In the phobias of the anxiety hysteria, the fear inhibits the activity and so gives a protection against anxiety.

Almost always with obsessions we find compulsions. These protect the patient against the obsession. The obsessional neurotic who doubts his wife's fidelity becomes compelled to spy on her. The woman who fears that she will poison her guests is compelled to entertain only in restaurants. The more exact nature of these compulsion symptoms will concern us in the next section.

There is usually much conscious anxiety with regard to the obsessions and feelings of inadequacy and helplessness in controlling them. This becomes so great that many obsessional neurotics finally feel depersonalized and unreal. Besides the secondary anxiety there is usually the so-called "compulsive doubting." This doubting occurs particularly with regard to the fact of the obsession but also covers many everyday decisions.

In severity, the disease ranges from mild obsessional preoccupation, which is but little disabling, to severe obsessional neuroses, which are completely disabling. Usually the disease continues in increasing severity and may end in decompensation into a psychosis. Sometimes, however, obsessions are overcome by causes of which we know nothing. The tendency is for symptoms to become generalized, *i.e.*, to become attached to the most varied stimuli in the environment.

Etiology.—Psychoanalysis of numerous obsessional neurotics has shown the following factors in the etiology. The affect connected with a repressed emotional experience is dissociated or isolated and

transferred or displaced to some relatively harmless object. This object, of course, has some relation to the primary emotional experience. The source of the patient's obsession of being infected by graniteware may go back to masturbation in a bathtub. The obsession is a transformed self-reproach for some forbidden sexual or aggressive act. The patient who denied the paternity of his daughter and was obsessed by his wife's unfaithfulness had strong unconscious homosexual impulses he could not admit. Actually, he would have welcomed a divorce. Freud has shown in detail how the "isolation" of the affect from its original meaning reduces anxiety. The hair-splitting doubting of obsessional neurotics is derived from the late anal period when ambivalence is very strong. The struggle between hostility and libido and between homosexuality and heterosexuality is strong at this point (*cf.* Chap. XI). There is the constant balancing between the force of the id urges of an anal-sadistic sort and the strongly developed, but not properly integrated, superego in the obsessional neurotic. The compulsive acts which usually follow obsessions serve to neutralize the guilt which the obsession arouses. As the ego becomes more and more involved and at a more regressed level, the whole life of the individual becomes concerned with the typical conflict of childhood, "May I be naughty or must I be good?"

The obsessional neurosis represents a symptomatic protection against repressed conflicts from the late anal level. The mechanisms of doubting, isolation of the emotion from its original situation, and undoing (*i.e.*, performance of the compulsive acts which neutralize the effect of forbidden wishes) enable the individual to reduce some of the anxiety which the threatened reawakening of the conflict arouses. The involvement of the ego and superego is at the pregenital ambivalent level, where ego was relatively weak and superego relatively severe. Earlier theories that the obsessional neurosis is a degenerative disease with neuropathic heredity have been today almost completely abandoned. Thus the obsessional neurosis, like all the psychoneuroses, is primarily psychological in origin.

5. Compulsion Neurosis

Symptomatology.—We have already seen that most obsessional neuroses show some compulsive traits. Similarly, most if not all compulsion neurotics exhibit some obsession. When the obsessions are more prominent than the compulsions we speak of obsessional neurosis, and when the compulsions are the more prominent, of com-

pulsion neuroses. Very often both types of symptoms are nicely balanced and we have obsessional-compulsion neurosis.

Compulsions are persistent and irresistible tendencies to engage in meaningless motor acts. These range from simple reactions of relatively segregated muscle groups, which we see in motor tics, to complex integrated motor acts like pyromania, the irresistible impulse to start fires; dipsomania, the irresistible impulse to drink; kleptomania, the irresistible impulse to steal. In both the tics and the monomanias, the obsessional idea connected with the compulsion may be quite repressed.

The most frequent type of compulsion is that where the impulse to perform an act which appears senseless to other observers is very strong and failure to do so creates anxiety. The compulsion, like the obsession, isolates the affect of unconscious conflict by displacing it to an indifferent act or object. Thus, the compulsions to count money, or to memorize railroad timetables, or to touch every paving stone become acts through which the energy connected with repressed and forbidden acts of looking and touching is discharged in a more economical fashion.

Connected with the compulsive acts are always some anxiety and usually much doubting. The compulsion neuroses, like the obsessional, may become chronic. The chronic cases gradually merge into the concept of compulsive character and anal character, on the one hand; and the acute merge into the psychoses, on the other. Actually, as we have seen, many of the ritualistic acts of the schizophrenic are compulsive in origin.

Etiology.—Compulsive acts, like phobias, protect against obsessional anxiety and so leave the individual ego more intact. In general, the compulsion represents an undoing of or protection against an id impulse which is not consciously recognizable. The sexual content of the compulsion is recognizable in some cases, such as the compulsion to look at female legs. In others, this is not so clear at first. Compulsions to cleanliness always protect against the guilt feelings connected with infantile sexuality. This is often connected with masturbation. In this case the obsession, "My hands are dirty," based on guilt for masturbation, which is isolated, leads to the compulsion, "I must wash them," which is an example of undoing. The frequent cases of hand-washing mania are thus explained. The compulsion to play cards or "fiddle" with one's hands, gloves, buttons, and so forth is often a displaced masturbation

equivalent. It is protective since the genitals themselves are not manipulated. The compulsion neurotic, like the obsessional, is in a continual conflict both between his homosexual and heterosexual strivings and between his love and hate impulses. He can hence neither love nor hate properly. In addition, his weak and vacillating ego is no match for the strong demands of the id on the one hand and the tyrannical superego on the other.

The prevalence of doubting in the compulsion neurotic as in the obsessional neurotic comes from these struggles. In some cases in adolescents the severe doubts which are felt with regard to a choice of the college course and of a career can be traced back to pregenital fixations, *i.e.*, before the time that psychosexuality was definitely established.

Since compulsion and obsessional neurosis represent a regression to pregenital sexuality, with an ego regression and with strong homosexual urges, therapy is difficult. Psychoanalysis is the therapy of choice but it is usually a long procedure. The successful treatment of the obsessional and compulsion neurosis by psychoanalysis requires on the average three times as long a period as does the treatment of hysteria.

6. The Anxiety Neurosis, Neurasthenia

Symptomatology.—Anxiety neurosis and neurasthenia were frequent diagnoses about ten years ago. Today they are seldom made because all neuroses start with anxiety and many of the cases previously diagnosed as anxiety neuroses were early obsessional neuroses on the one hand and anxiety hysterias on the other. Neurasthenia scarcely ever occurs without some marked obsessional or hysterical content.

The symptomatology of the anxiety neurosis is simple. The basic symptom is anxiety of the free floating sort. Physical symptoms like tachycardia, respiratory upsets, vasomotor disturbances, and perspiration often occur. The cause of the anxiety is never known to the patient. It is felt as something inside one's self. It may be displaced on a succession of harmless objects. In addition, there is usually irritability, insomnia, and *pavor nocturnus* (severe anxiety attacks in the night).

Neurasthenic patients often develop paresthesias and hyperesthesias, but the central symptom is an exaggerated feeling of fatigue which is so constant as to diminish capacity to work. The

popular idea of the nervous breakdown is involved here. There is irritability, depression, hypochondriasis, insomnia, and various muscular weaknesses, but the central feeling is that of "not being able to go on" with one's work and social obligations.

Etiology.—Neurasthenia and anxiety neuroses are the two diseases Freud originally called the true neuroses. As we saw above, neurasthenia was supposed to follow on sexual frustration. Although Freud never publicly withdrew this viewpoint, there are reasons to believe that the true neuroses in contradistinction to the psychoneuroses are rare. Freud (1936) later showed that all neurotic anxiety occurs when repressions threaten to break down. Anxiety neurosis is probably the early stage of any neurosis. Neurasthenia is probably a hysteroid form of hypochondria in which pregenital factors are at work. The pure forms of both anxiety neurosis and neurasthenia are probably rare. When they do exist, they represent a mixed form of repression between late anal and phallic stages with some aspects of each.

7. Anxiety Hysteria, Phobias

Symptomatology.—In earlier psychiatry, anxiety hysteria and the phobias were classified as psychasthenias or as obsessional neuroses. Careful psychoanalysis of many patients has shown this classification to be etiologically inadequate. While it is true that the phobia, which is the chief symptom of anxiety hysteria, is somewhat obsessional in nature, it is easy to show that the sufferers from this disease have neither the depth of regression nor the pregenital conflicts of true obsessional neurotics.

Anxiety hysteria, under which we include all the phobias, has a simple symptomatology. The patient has morbid fears of a situation or object. This may be allayed by not going in the vicinity of the situation or object except under certain circumstances. Secondary symptoms include general anxiety about the phobias, insomnia, and frequent disturbances in the sexual field.

Etiology.—The phobias serve as a protection against a situation which might give rise to primary anxiety. Thus the affect of an unconsciously unacceptable infantile conflict is projected outward to prevent the arousal of anxiety. These conflicts are usually on a phallic level and come from the Oedipus situation. Consequently many phobias in adults are concerned with situations which normally cause fear in children, such as the fear of being shut in, claustrophobia;

the fear of having to cross the street alone, agoraphobia; and the like. The fear is a reaction formation against temptation because one has an even greater fear of the consequences of temptation.

The etiology of anxiety hysteria is the same as that of conversion hysteria, of which we shall speak next, except that the ego is more involved and there is greater regression and more ambivalence. Both diseases are caused by conflicts at the phallic level, however, and both represent attempts to overcome anxiety which was originally aroused by the Oedipus conflict.

8. Conversion Hysteria

Symptomatology.—Of all the psychoneuroses we know most about conversion hysteria. We have already seen (Chap. II) how the nineteenth century interest in conversion hysteria and hypnosis was combined with the realization that the symptoms of conversion hysteria are due to self-induced hypnosis. The history of hysteria was important because the study of this disease gave rise to the chief tenets of modern medical psychology. Today the study of hysteroid conditions like those of the pathoneuroses and organ neuroses (*cf.* the last chapter) is giving rise to psychosomatic medicine. Hysteria refers to those symptoms of "physical" disease which arise on a primarily psychological basis. The symptoms are always connected with organs whose motor or sensory control is mediated by the central nervous system. They are distinguished from the organ neuroses in that the organ neuroses affect organs innervated by the autonomic system. They are distinguished from the pathoneuroses in that their origin is almost exclusively psychological. The psychologically determined hypo-, hyper-, and para-functions of the sense organs and striated musculature are often referred to as stigmata. In addition to the stigmata, there are episodic phenomena of a hysterical nature which range from hysterical "epilepsies" to various mild nauseas and the like. In the concept of hysterical episodes are also included various dream states, somnambulisms, fugues, and personal amnesias. Hysteria, like syphilis, may be called the "great imitator." Hysteria can be confused with nearly every physical and mental disease.

Etiology.—Conversion hysteria utilizes chiefly the mechanism of conversion. In conversion, the repressed affect is converted into a symptom in such a way that unconscious conflict is avoided or

reduced. This is the so-called *primary gain* of the neuroses. Anxiety is diminished and the ego is left relatively intact. The organ affected has some significance or meaning to the individual and the conversion often follows the principle of *somatic compliance.* By somatic compliance is meant the fact that, although the organ cathected is significant in the life history of the individual, it may be somatically weak through constitutional factors or previous disease. The primary gain comes from the variation of unconscious conflict through the development of symptoms. The sufferer from conversion hysteria also gains sympathy from the family and companions and does not have to face the real life situation. This is called the *secondary gain.*

These conflicts of hysteria usually go back to the Oedipus situation, where there was a conscious attachment at a phallic level to the parent of the opposite sex. The fear of the consequences of the Oedipus attachment leads to the repression and a resultant denial of all sexuality. The physiological sexual ripening at adolescence can find no natural outlet because of the fear of the consequences of all sexuality. Thus sexuality is denied and the libidinal energy is converted into the symptoms of physical disease.

Hysteria, then, is a regression to the phallic level of sexuality. The struggle of the hysteric is always over a conflict between heterosexual urges and a fear of the consequences of these. The sexual elements are genital. The symptoms serve as a denial of the causes of the anxiety.

Conversion hysterics seldom show only "physical" symptoms. The phallic character is clearly seen in the hysteric who develops behavior problems as well as symptoms. He often shows both curiosity and exhibitionism but denies the sexual significance of these behaviors. There are certain signs of hostility to frustration and there is usually a preoccupation, accompanied at the same time by guilt feelings, with regard to masturbation. The conversion symptoms represent the displacement of repressed genital strivings upward. In this there is an eroticization of the sick organs and distortion as in dreams, while the organ chosen usually has special erotic significance for the individual. There are frequently "hysterical" attacks simulating epilepsy. Freud was able to show that the hysterical episodes always represent a disguised sexual act in which certain psychoanalytic mechanisms like condensation, overcompensation, multiple identification, and reversal of normal time

sequences are involved. Thus in the hysterical convulsion, the individual acts out a coitus with his own body, acting both the seducer and the seduced, the male and the female, often beginning with an exaltation similar to orgasm and ending with mimicry of passional attitudes and the like. The attenuated and abbreviated forms of the hysterical episode on analysis are all seen as pantomimic portrayals of sexual activity at the phallic level.

In the last four chapters, we have covered the field of mental illness proper. We started with the primarily organic psychoses, developed the primarily functional psychoses, and ended with the psychoneuroses. All these diseases have in common the fact that the symptomatology is somehow concerned with cognitive processes and so are mental diseases in the narrow meaning of the word. Such mental diseases lead to maladjustments which have been called *autoplastic* in that the inner personality structure is changed and mental symptoms result. Modern psychiatry dealt first and most thoroughly with these diseases because all psychology was concerned with the perceptual and cognitive processes (*cf.* Chap. IV).

Our more recent emphasis on behavior disorders and emotional disorders has developed the modern psychiatric interest in character disorders and sexual maladjustment which will concern us next. The disordered characters show adjustment which has been called *alloplastic* in that the maladjustment works itself out on the environment.

The psychoses and psychoneuroses all have some things in common. They represent regressive forms of behavior which are exhibited when frustration in adulthood is too severe. Sometimes the regression is to an earlier fixated period. At other times development has been fixated at an earlier period and only gone superficially beyond it. Undoubtedly, biological and constitutional factors enter in to determine the depth of the regression. In all these diseases there are medical as well as psychological problems. Disregarding the primarily organic psychoses, we may say that as we come up the regressive scale from schizophrenia to hysteria, psychological factors become more important. Despite the great importance of schizophrenia as a medical problem, the psychoneuroses are much more frequent. Undoubtedly in the psychoses and psychoneuroses there are important sociological problems besides the psychological. Mental disease often occurs as a breakdown in adulthood on the basis of sociological frustration. Sociological frustration, however, prob-

ably never causes mental illness alone but only in those cases where a psychological basis is laid down

Bibliographical Note

The literature on the psychoneuroses from the standpoint of psychoanalysis is particularly rich, as this was the first field in which Freud worked. Nearly all the papers of Freud (1924*a*) are particularly pertinent; also selected papers in Abraham (1927) and Ferenczi (1916, 1928). This whole literature is reviewed by Fenichel (1934) and by Rickman (1928). See also Hendrick (1939) and Menninger (1937*a*).

Faris and Dunham have showed the importance of sociological factors in mental disease. Kardiner's work is also important in this respect.

CHAPTER XIX

ABNORMALITIES OF SEXUAL BEHAVIOR

1. The Relationship between Perverse Sexual Behavior and Mental Disease

The "normal" layman realizes that there is such a thing as sexual perversion, but he looks at it with horror and considers the pervert either a sinner whose depravity is completely beyond his comprehension or a criminal who should be severely punished by the regular legal procedure. The Victorian taboo on the frank discussion of one of the most important of biological functions applied even to medical men until recently. A few sexologists like Krafft-Ebing and Havelock Ellis (1931*b*) assembled a great many descriptive data about the abnormalities of sexual behavior, and about the beginning of the twentieth century the sexual perversions were first seen as psychiatric problems. It remained for Freud, however, to attempt to account for the psychodynamics underlying perverse sexual behavior in the scientific manner and to relate these behavior forms to the normal personality on the one hand and the mentally diseased personality on the other hand. Freud's great contribution to this field, *Three Contributions to the Theory of Sex*, appeared in 1905. We have already studied his theory of psychosexual genesis. In this chapter we shall see how perverse sexual behaviors are the result of fixations or regressions to the various stages of infantile sexuality.

Sexual perversions represent behavior in which release from sexual tension is obtained by practices other than that of normal heterosexual coitus. These practices usually involve contact of the sexual organs with other bodily organs, such as the hand, the mouth, or the anus. In the period of infantile sexuality both the oral and the anal regions have sexual significance in the meaning we gave the word "sex" in Part III. Since the psychoses and psychoneuroses are looked on as *defences* against returns of repressed infantile material to consciousness Freud was able to show that the perversions represent fixations at levels of infantile sex adjustment. In psychosis, as we have seen, the ego allies itself with the forces of the id to

distort reality and so prevent the unconscious internal conflict from causing continuous anxiety to the individual. In the psychoneuroses the ego struggles with the id and the psychoneurotic symptoms may be looked on as the result of this struggle. In the perversions the ego accepts the pregenital sexual urges, allows them a place in consciousness, and accepts the perverse sexual behavior forms as natural. In psychoses and psychoneuroses the unconscious infantile strivings appear in a disguised or distorted form and often have little to do with sexuality on the surface. In perversion the infantile means of satisfaction and the infantile sex object are often disguised, but the behavior is realized and admittedly *sexual* in nature. In other words the behavior is aimed at the reduction of libidinal tensions. For instance, the homosexual nearly always believes that there are two classes of men or women, the homosexual and the heterosexual, and that he simply belongs to the homosexual class. He considers himself that way "by nature," and, despite the fact that he suffers from social pressure, he believes that he has a right to his own sexuality and that he should fight for that right if necessary. This is one of the reasons why the therapeutic treatment of homosexuality is very difficult. The homosexual, and this is also true for other sexual perversion types, may have no *neurotic* struggle. Since perverse behavior forms are frequent in neurotics and since many perverts also show neurotic symptoms, this of course does not apply to the borderline cases. Perverts have many conflicts based on the social taboos against perversion and on the fear of being exposed as perverts. Consequently many of them are also neurotic. But some perverts openly admit their perversion.

With this in mind, Fig. 12 and Table 11, which give the theoretical structure of the perverse personality, may be understood. The theoretical structures of the normal, the psychotic, and the psychoneurotic are again included for comparative purposes.

Just what it is that makes certain individuals accept fixations at infantile developmental stages and others develop mental illness is by no means clear. Various theories have been developed on both psychological and biological grounds. Undoubtedly the constitutional and biological factors must be taken into consideration. Some of the passive male homosexuals, for instance, develop the secondary sex characteristics of the female, and many of the female homosexuals develop the secondary sex characteristics of the male; but by far the

DIAGRAMMATIC REPRESENTATIONS OF PERSONALITY STRUCTURE

Harmonious Balance

Inharmonious Balance

The Longer Arrows Refer to Relative Balance of Personality as a Whole with the Environment

The Shorter Arrows Refer to the Relative Balance of the Forces Within the Personality

Socially Acceptable Behavior

Unacceptable but Disguised

Disguised but Partially Acceptable

Undisguised and Socially Unacceptable

SE *- Super-ego*

C *and* ***M*** *- Respectively, Cognitive and Motor Aspects of the Ego*

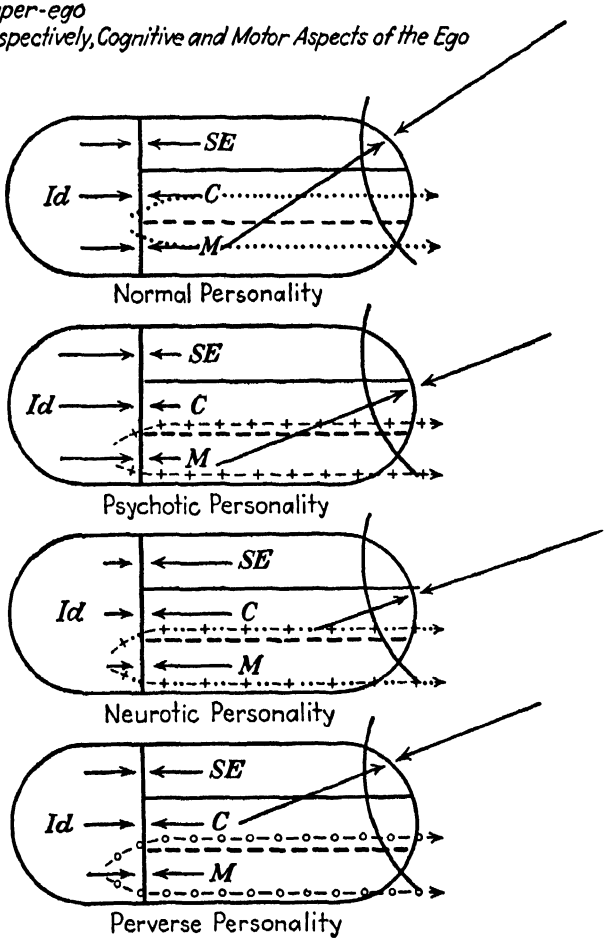


FIG. 12.—Comparing the perverse personality with the other types.

greatest number of sexual perverts seem to be anatomically quite normal. Psychological and anatomical sexuality are, however, by

TABLE II.

	Nature of internal conflict	Social nature of resultant behavior	Degree of regression	Relation of basic urges to love object	Resolution of conflict results in
Sexual perversion	Balance may be either harmonious or inharmonious; no break with reality but with sexual mores	Behavior socially unacceptable but person "normal" except in sexual sphere	Unless combined with psychosis, neurosis, or genius, there is fixation rather than regression. (*Cf.* Table 2)	May be postambivalent in homosexuality. Other cases ambivalent	Perverse sexual practices
Normal	Harmonious balance between ego, superego, id, and outside reality	Behavior in all spheres constructive and socially acceptable	None. Genital stage reached.	Postambivalent. Some urges gratified, others sublimated.	No conflict
Psychosis	Extremely inharmonious balance in ego, superego, id, and outside reality. Ego powerless or weak against id and breaks with reality. Superego projected or taken over by ego or oversevere	Socially unacceptable behavior in both motor and cognitive spheres. Id impulses break through in a disguised form	To at least the early anal, thus beyond the level of reality testing. (For the individual diseases, *cf.* Table 2)	Objectless or extremely ambivalent	Severe symptom formation in cognitive and motor spheres
Psychoneurosis	Inharmonious balance in ego, superego, id, and reality. Ego in conflict with superego and id but ego on side of reality	Behavior only partially acceptable. Destructive in both motor and cognitive spheres but id impulses checked	To late anal or phallic, thus not beyond the level of reality testing. (For individual diseases, *cf.* Table 2)	Ambivalent	Autoplastic symptoms, particularly anxiety

no means directly correlated. Every individual is psychologically bisexual.

2. What Constitutes Perversion in Sexual Behavior

Until the introduction of the psychoanalytic concepts of libido and psychosexual genesis into the literature, only heterosexual coitus was considered normal sexual behavior. The perversions, to be sure, were realized to be sexual in nature, but a strict line was drawn between normal behavior forms and the sexual perversions. Thus it was considered that most individuals were "normal" and limited in their sexual aims to coitus, while a few individuals were abnormal and limited in their sexual aims to the perverse behavior forms. To be sure, most individuals realized that certain forms of behavior with the mouth, such as kissing, were closely related to sexuality, and many individuals realized the sexual significance of certain anal behavior forms. But those individuals who have no conscious interest in the anus are very often still interested in the anal regions, such as the buttocks. The sexually stimulating effect of the buttocks, for instance, in the female is quite obvious in hula-hula dancing and in certain modes of walking and dancing. The movie actress Mae West has capitalized this with remarkable success.

Today we realize that all behavior which brings individuals into close physical contact is libidinal or hostile in nature. Thus, as we have seen, close friendships, parent-child love relationships, even platonic love affairs, as well as normal adult heterosexual affairs, are libidinal in nature. Perverse behavior forms, technically speaking, are the forms of sexual behavior in which there is orgiastic release of genital tension by other means than coitus or with other objects than an adult sex partner of the opposite sex. Psychiatrists today realize that all possible sex behavior forms may play a role in leading up to the normal sexual act. Psychoanalysts have theories as to why this is true. Ferenczi (1938) has written a very stimulating, although speculative, book on the psychological significance of sexual foreplay and coitus.

We further know that the intermixture of the aggressive urges with both homosexual and heterosexual erotic urges occurs in all individuals. Consequently, all individuals exhibit in their normal sexual behavior some aggression. This is seen in the semisadistic acts of the normal male and the semimasochistic acts of the normal female. The average healthy male often desires to create at least an attenuated form of pain in sexual behavior. The average healthy normal female enjoys being partly hurt. The sadistic and masochis-

tic elements in sex life become abnormal only when the satisfaction is received solely through the inflicting of or the suffering of pain without the prevalence of concomitant tenderness. When the normal libidinal and aggressive urges are completely lacking or are highly overemphasized, or when the object with which the sexual satisfaction is finally obtained is other than the adult member of the opposite sex, or when the means taken to arrive at sexual satisfaction do not end in coitus, we speak then of sexual perversion.

It is impossible to draw a strict line between perverse sex reaction forms and the normal forms. Even many practicing physicians do not know of what the normal sexual act should consist. It is not our purpose in these paragraphs to give a manual on love-making or to set up rules about how to go about the sexual act. There are many such books now available.[1] Rather we are interested in setting up certain criteria for the use of the psychiatrist and psychologist as to when a sexual relationship may be considered normal and satisfactory. The basic criterion of a normal coitus is that both parties should experience the orgasm through coitus and preferably, although it is not of great importance, simultaneously. Such sexual behavior leads not only to the highest amount of pleasure in itself, but to complete relaxation afterward. The sexual act may be divided into a period of preliminary activity or forepleasure, a period of tumescence called the orgasm, and a period of relaxation or detumesence. The sexual act properly performed should leave both individuals in a state of complete detumescence. It is impossible to set up rules regarding either the length of sexual intercourse or its frequency, but we can say that on its conclusion sexual desire should again arise only after a period of some rebuilding of physiological and psychological tension. Normal sexual relations thus may be relatively frequent and the individual coitus may last a relatively long period of time, or they may quite normally occur relatively infrequently with relatively quick satisfaction. We may, perhaps, give some figures on limits of the normal range. Certainly for individuals living in normal marriage relationships it can be said that coitus occurring only once a month or once in several months is too rare. Likewise we may say that over a period of time coitus occurring as frequently as once or twice a day is too often. It is quite obvious that coitus which lasts only a minute or two or in which the orgasm of the male occurs before penetra-

[1] *Cf.* Long, van de Velde, Ellis (1936, 1931) and Buschke and Jacobsohn.

tion—the so-called "ejaculatio praecox"—is not long enough, whereas coitus which lasts an hour or more is too long. It is almost impossible to get accurate statistical figures to set up a statistical norm, and, as we have said, the deviations on each side of such a norm are wide.

In order to arrive at complete sexual satisfaction it is important that the sexual excitation reach a high point. For this reason the preliminary pleasure or the foreplay of the sexual act is very important, particularly for the female. In this category is included all the forms of behavior which lead up to the actual act of coitus: thus kissing, fondling, stroking are of importance. It is important also to realize that the libidinal urges wax and wane, grow through youth, become strongest probably in the twenties, and gradually diminish as the individual becomes older. Very often there is a recrudescence shortly before the involutional period after which sexuality becomes of less importance. Similarly the libido varies not only through the whole lifetime of the individual, but from year to year, month to month, even from day to day. Individuals who may be said to have a completely normal sexual relationship may undergo, on the one hand, fairly long periods of abstinence, such as is necessitated by pregnancy in the woman, and, on the other, periods of heightened sexual activity, such as occurs in the beginning of the normal love affair, the second honeymoon, and at certain times of the year. There may be periods of increased libidinal motivation on vacations or in celebration of important attainments, and there may be decreases in times of disappointment, worry, and frustration or at times when one of the sex partners is forced to engage in heavy work. All these things make it difficult to give definite rules about what is normal in sexual relationships. The psychiatrist sees many individuals who are concerned about or worried about their sexual problems. Individuals are very often worried about a preference for certain types of sexual behavior or certain positions in the sexual act. Most of these individuals may be helped and reassured by receiving accurate information concerning sexuality.

3. The A- and Hyper- Functions of Sexuality

We may now turn to the abnormal functions. As in the case of all psychological mechanisms the libido may suffer from being underdeveloped, as in the a- functions, or from being overdeveloped, as in the hyper- functions. On the one hand we have *frigidity* in the

female and *lack of libido* in the male. In the male we also have *impotence*, which denotes the presence of conscious libidinal drive without the ability to perform the sexual act through inability to gain an erection. Extreme overdevelopment of libido is called *nymphomania* in the female and *satyriasis* in the male.

Frigidity refers to lack of sexual desire in the female. This may range from the inability to experience the final sexual satisfaction of the orgasm, but with definite pleasure in the sexual act, through lack of conscious desire for sexual behavior, to outright aversion to the sexual act. The first type, *i.e.*, inability to experience the orgasm, is very frequent so far as we are able to judge from accounts of gynecologists. Rosanoff quotes their estimates that 20 per cent of all females never experience an orgasm and that 60 per cent experience one irregularly. In itself such frigidity may not be an abnormality and often comes about from the ineptitude of the male in love-making. This form may be quite frequently cured by proper sex instruction. Undoubtedly, however, it sometimes represents an inhibition where the female through unconscious fear and anxiety is unable to abandon herself in the love relationship. This anxiety often arises from the fear situation in connection with the Oedipus complex and so is related to hysteria. We realize that such forms of sexual maladjustment are closely related to the neuroses because they very frequently occur in the neuroses. In such cases any sexual act becomes an unconscious expression of infantile sexuality and is closely connected with the danger of castration. The fear of castration, which is often present in mild cases of frigidity, may be said to be always present in the more extreme forms. Frigidity is also caused by repressed hostile urges toward men and may indicate a repressed homosexuality. Complete frigidity in the female (*i.e.*, where there is no libidinal desire for heterosexual intercourse) is a more severe form. It is, of course, frequent in overtly homosexual women but may occur with heterosexual libidinal attachments of a tender sort. There are various intermediary forms, frigidity except with certain men or male types, except under certain circumstances or coitus positions, or unless certain acts are performed in the foreplay. A particular form of female frigidity is vaginismus, where the vaginal orifice is so contracted at the moment of intercourse that no penetration is possible. Frigidity of the milder sorts, except where it is based on ineptitude of the male and only instruction is necessary, responds well to psychoanalytic treatment.

In the male there may be *lack of libido* or weakened libido, which corresponds to complete or partial frigidity in the female. This usually arises because of repressed homosexuality and repressed hostility. Considerably more important because very much more frequent are the various forms of psychic impotence. Some of the milder of these, undoubtedly like some cases of female frigidity, are brought about by ineptitude on the partner's side, but most have an unconscious psychological etiology. *Psychic impotence* is exceedingly frequent and it has been estimated that all males suffer from it at one time or another. It also has degrees. Complete impotence refers to complete inability to gain an erection. Loss of potency at or just after penetration is another form. *Ejaculatio praecox* refers to ejaculation before or immediately on penetrating the vagina. *Ejaculatio retardata* is the inability to ejaculate after continued intercourse. *Priapism* refers to the failure of the penis to go into a state of detumescence. There are also individuals who superficially perform normal coitus, but experience no true orgastic satisfaction. Nearly every individual suffers some such impotency periodically and, undoubtedly, a fairly high proportion of the male population suffers from such disorders chronically. Statistical figures are hard to obtain, but one may suppose, judging by the wide sale of useless potency nostrums, that a good percentage, perhaps as high as 20 per cent, suffer chronic psychic impotence.

As in the case of females psychic impotence of the milder forms is related to hysteria and comes from unconscious fear of the consequences of sexual activity. There are also hostile urges often toward the sex partner and in some cases deep unconscious homosexuality. Psychoanalysis is the therapy of choice and has had good success with the milder forms. The topic is treated by Menninger (1937*b*) and in some detail in Bergler's monograph.

The hyper- functions of libidinal urges are just as pathologic as the hypo- functions. They may represent an even greater regression or earlier fixation on infantile stages than do frigidity and impotence. They are perhaps less frequent although statistics are again hard to gather because the individuals suffering from them seldom consult physicians. They are called *nymphomania* in the female, and *satyriasis* in the male. The nymphomaniac takes indiscriminately many lovers and/or demands frequent sexual satisfaction (which she rarely attains) from them. The satyriasic individual is the Don Juan or Casanova. In both of these diseases there are obviously

strong phallic-narcissistic components. The changing of love partners is like the many "dates" of the adolescent (*cf.* Chap. XI). In addition there are usually strong unconscious homosexual strivings. The person must prove his or her seductive value to the opposite sex and prove his masculinity or her femininity. Hostile wishes toward members of the opposite sex are also present. After the act of seduction, the partner is rejected or punished. The presence of strong oral fixations is indicated also by the predilection of nymphomaniac females for fellatio and satyriasic males for cunnilingus. These people are usually strongly oral dependent types, who feel rejected by the opposite-sexed parent and take revenge on this parent in a series of affairs.

So far we have spoken as if all variation in libido was psychologically conditioned. This is certainly not true. Physiological factors enter to make the "normal" range of libidinal energy as large as it is. In the extreme or pathologic cases, however, psychologic factors probably always play a role. Thus therapy must to a certain extent always be psychologic in nature.

4. The Para- Functions of Sexuality

Para- Functions with Regard to the Object.—*Homosexuality* is certainly the most frequent and psychiatrically important of the perverse sexual relationships. It has occurred in all ages and in all societies (in some it has even been considered the ethically right love relationship) and affects many individuals who otherwise are normal, productive, and sometimes even geniuses. Despite this fact society, probably rightly, guards against it, and the homosexual is, except in certain definitely homosexual circles, always subject to social and often neurotic conflict. The homosexual hence becomes a subject of definite psychiatric interest.

Homosexuality refers to the choice of a member of one's own sex (biologically and anatomically) as a sex object. It is necessary to stress the biological and anatomical aspects because *psychosexually* the homosexual belongs to the opposite sex. This statement is not quite accurate since today we know that all individuals have both homosexual and heterosexual urges. Individuals are not either homosexual or heterosexual, but bisexual. Heterosexuality merely means that the heterosexual components are strong enough to overshadow the homosexual.

For this reason it is almost impossible to give statistics on the frequency of homosexuality. If we define the homosexual as one whose love object is always of the same sex and who has no libidinal attachments to members of the opposite sex, we may estimate male homosexuals as making up about 2 per cent of the population. Female homosexuality is probably even more frequent. It is these homosexuals who furnish the greatest psychiatric problem, as the lack of ability to control their libidinal urges leads them into socially embarrassing situations. Of the remaining male population Rosanoff believes that 10 per cent should be classified as bisexual, *i.e.*, they enter both homosexual and heterosexual relationships in a society where both are possible. Many other individuals develop homosexuality in social situations like schools, camps, and prisons, where heterosexual sex outlets are impossible. In fact, it is doubtful if there is anyone who has never had a homosexual libidinal attachment, although in many cases these do not lead to overt behavior and in many others they remain unconscious. Judging by studies of Davis and Hamilton (1929), at least 50 per cent of males and 25 per cent of females have had overt homosexual experiences. In most cases these represent pubescent transition to genital sexuality, which, once obtained, remains the dominant type.

Homosexuals fall into three types. The active males play the male role in intercourse, as do the active females. The mixed types (the most frequent) assume both roles. The passive males play female roles, as do the passive females. Homosexual practices include interfemoral coitus, mutual masturbation, cunnilingus and fellatio, and pederasty. In other words, they include all possible combinations of the genitalia with the oral and anal regions.

The psychological elements in homosexuality are connected with events from the Oedipus situation. In both male and female homosexuality there is a negative Oedipus situation: the boy identifies himself with the mother and loves or fears the father, and the girl does the inverse of this. Exactly how this inverse identification occurs is not clear and undoubtedly varies in the individual case. To be sure, everyone makes some identification with both parents. The positive Oedipus situation turns out, however, that the primary identification is with the parent of the same sex. In the negative Oedipus situation the inverse of this is true.

The problem of the choice of the active and passive roles in homosexuality can be partially solved by psychoanalytic theory. All

male homosexuals, however, have strong passive components and active male homosexuality is often a reaction formation against these. It becomes a socially conditioned compromise. "I am a woman and hence love men, but as an anatomical man I can't play the complete female role." The exact inverse of this is true for female homosexuals and completely passive female homosexuals are very rare. As we have already pointed out the mixed behavior is most frequent and probably represents a compromise of the sort, "You play the passive role this time, and I'll play it the next." There are still predominantly active and passive male and female homosexuals. Silverberg has pointed out that the active male homosexual probably starts in a positive Oedipus relationship with the mother but, feeling rejected by her, identifies himself with her through fear of the father and hence consciously wishes to love younger boys the way he unconsciously wishes his mother to love him. The passive male homosexual falls from the first into a negative Oedipus situation, identifies himself with the mother, and, on feeling rejected by the father, wishes to be loved by men consciously as he unconsciously wished the father to love him. In females the relationship is the inverse. In final analysis homosexuality like all the perversions is economical in that it allows some other outlet for sexuality than the feared and repressed genital one.

Homosexuality may arise on a pre-Oedipus basis and the choice of means of homosexual satisfaction indicates always the strong oral and anal elements involved. Hostile impulses are also involved. Helene Deutsch (1925) claims to have found specific pregenital factors in female homosexuality as both she and Karen Horney (1933) find specific factors in female development in general (*cf.* Chap. X).

Besides the psychological factors in homosexuality, constitutional factors undoubtedly play a role in many cases. There is probably a deep-lying biological basis for human bisexuality. In some cases (hermaphroditism) primary and secondary anatomical sex differences are plainly discernible. Female cells have been found in the interstitial regions of the gonad and male cells in the interstitial regions of the ovaries in some cases. Such cases are primarily constitutional in nature. They account, however, for but a small percentage of the cases of homosexuality. The feminine traits that are quite discernible in the vast majority of male homosexuals are

definitely socially conditioned acquired traits. Similarly socially conditioned are the masculine traits in female homosexuals.

Psychoanalysis has had some success in cases of homosexuality where there is a marked bisexual pattern and where a secondary neurosis makes the individual suffer. It is possible in some cases to develop a neurosis and through psychoanalysis of it to effect a cure. The typical "adjusted" homosexual has, however, no marked neurotic (ego versus id) conflicts and hence has no desire to be cured. It is asking him to give up his sexuality and he shrinks from this. Let the reader ask himself how he would like some psychoanalyst to turn him into a girl, or vice versa. His horror of the very idea simply goes to show that our sexuality is our most highly prized psychological trait and that Freud was right in paying so much attention to it. The psychoanalytic theory of homosexuality is treated in detail by Stekel (1922), Ferenczi (1916), and Freud (1930).

The other para- functions of sexuality are less frequent and of less psychiatric interest and we shall deal with them more briefly.

Pedophilia refers to the love of small children on either a heterosexual or a homosexual basis. That strong hostile urges are connected with pedophilia is indicated in the many hideous cases of infantile sadistic sex murders in pedophilics. Pedophilia comes again as a distorted solution of the Oedipus situation. The identification is undoubtedly with the parents and the love identified with the self as child. The pedophilic consciously loves and is forced to destroy the child as he consciously wishes his parent would love him and fears his parent will destroy him.

In *bestiality* the love object is a subhuman animal. Bestiality is frequent as a nonpathological sex behavior in walks of life where human contacts are relatively few. In its pathologic state it represents an unconscious identification of the animal with some human figure. In his basic case histories Freud (1924*a*) has given several examples of how fear of parents may lead to animal phobias.

In *fetishism* the love object is either a part of the human body (hair, teeth, or feet fetishism) or some piece of human apparel (glove, purse, shoe fetishism). Orgasm only occurs in the presence of the fetish. Although actual coitus sometimes is used to obtain satisfaction the mere looking at or touching of the fetish produces orgasm in some. It is much more frequent in men than in women, and psychoanalysts have shown that the fetish represents the unconscious idea of the imagined female penis. The fetishist is the

individual who has been severely traumatized by the discovery of the nature of the female genitalia. He supposes females have been castrated. Only on assuring himself that they have not, *i.e.*, by possession of the penis, is he able to consort with them and overcome his own castration fear.

Para- Functions with Regard to the Means of Satisfaction.—Besides perversions with regard to the love object there are perversions with regard to the means of satisfaction. Normal sexuality must end in coitus. Coitus is the union of the genitalia of two adult members of different sex. As sexual satisfaction is perversely obtained with other objects, it is also perversely obtained by other means. The object may still be perverse in itself. Thus fellatio may be used in either a homosexual or a heterosexual sex relationship and is considered perverse in both. Besides fellatio, we have already discussed cunnilingus and pederastry in connection with the means of homosexual satisfaction. These may occur as perverse means in other object relationships. They are utilized by individuals who have strong oral and anal components in their libidos.

Masturbation in infancy and puberty may be considered a universal, and by no means pathological, phenomenon. Questionnaire studies (*cf.* Davis) indicate that over 90 per cent of males and over 80 per cent of females remember their adolescent masturbation. In the others there was probably masturbation, the memory for which has been repressed. Masturbation may be considered quite normal in older individuals who have no other sexual outlets. Of course, it remains an infantile and narcissistic sex outlet and is pregenital, but it can be considered pathologic only when there are other outlets for sexuality and these are not utilized. Some individuals do remain fixated on masturbation and prefer it to other sex outlets. These usually are infantile personalities or implicit homosexuals who cannot face homosexuality. In some of the psychoses and psychoneuroses, abnormally frequent masturbation occurs. Although there is a widespread belief that masturbation is etiologic in mental illness, psychiatrists are agreed that it is only symptomatic.

Exhibitionism; Scotophilia.—Exhibitionism refers to sexual satisfaction through exhibition of the body, particularly the genitalia, and scotophilia refers to sexual satisfaction through perceiving the body, particularly the genitalia. Mild forms are quite common and all young people go through a curious age and like to show their bodies. There are individuals, however, who gain an orgasm only

when they expose their bodies or look at the bodies of others. Exhibitionism and scotophilia are both more frequent and severe in men. The burlesque music hall depends almost entirely on scotophilic men. Psychoanalytically exhibitionism represents a denial of castration and an invitation for females to deny castration also. Scotophilia represents the striving to deny feminine castration. Thus they are closely related to fetishism.

Sadism; Masochism.—We have already met the hostile and aggressive urges and seen how they are fused with the libidinal urges throughout life. Sadism and masochism represent the sexualization of hostile urges so that sexual gratification comes from hurting in sadism and being hurt in masochism. Here again some sadistic coloring is typical in the male libido and some masochism in the female libido. Sadism and masochism are perverse forms when they are the prevalent and the only means of sexual satisfaction. Sadism always represents regression to or fixation on pregenital levels of infantile sexuality. Although it is not obvious and cannot be demonstrated in this book, both sadism and masochism represent economical solutions to the conflicts of infantile sexuality. Masochism may thus be a regression from Oedipus wishes to the acceptance of punishment as a socially acceptable surrogate. That sadism is economical is more obvious. Sadism allows the male to overcome feminine resistance. The exact methods by which sadism and masochism become separated from constructive libido and become libidinal ends in themselves must be studied in the more detailed treatises.

Psychodynamic theory is beginning to understand the aberrations in sexual behavior. We finally have the beginnings of a scientific dynamic theory which removes perversion from the field of baffling problems of man's moral degeneracy and gives us some understanding of perversion as a psychobiological problem. Another field in which psychodynamic theory has recently made much headway is that of behavior disorders. These individuals of whom we shall speak in the next chapter, like the perverse, were considered simply bad and degenerate until the last decades.

Bibliographical Note

Besides the earlier works of Krafft-Ebing and H. Ellis (1931*b*), Freud (1930, 1924*a*, Vols. I, II) is of the greatest importance. Stekel (1922, 1924, 1927, 1929, 1930) and Hirschfeld also have made important studies. Fenichel (1934) gives a good summary of all the literature on the psychoanalysis of sexual perversion.

CHAPTER XX

CHARACTER DISORDERS

1. The Scope of the Problem of Character Disorder

In the category of character disorder we include a great many individuals whom the layman would consider simply queer or mean or unhappy or vicious or wicked. We include other individuals who seem superficially to be quite well adjusted but in whom on closer observation we find some disbalance or lack of proper integration between the various constituent parts of the self. Until recently such individuals were looked on as problems for the clergyman if their character defect was relatively mild or for the police court and the penologist if their character defect was severe. The normal individual is one in whom there is a proper balance between the forces of ego, superego, and id and in whom the ego has a proper relationship to outside physical and social reality. Recently it has been shown that disbalance in these functions, which is not marked or severe enough to create actual psychosis, psychoneurosis, or perversion, creates character disorders or character neurosis. Psychoanalytic characterology, as this branch of the theory is called, is the least systematically developed. There is considerable confusion concerning the terminology which is to be applied to the various character types, with undoubted repetitions under different names of very similar character syndromes. Many points of the theory of character disorder remain to be worked out. However, with its development we may say that the last group of abnormal behavior types which previously could not be explained scientifically are beginning to be understood in a scientific manner.

Before we go on to the detail of the psychoanalytic characterology and attempt a systematic classification of the various forms of defective character, it may be well to say something of the history of the problem and to give some examples of character disorders. Although laymen have for years considered such individuals simply as morally degenerate people, or as markedly unhappy people, professional psychiatrists have for some time realized that certain

character defects should be studied psychologically. Kraepelin introduced the problem to psychiatry. He used the concepts of "original morbid states" and "psychopathic personalities." The concept of original morbid states has been given up in modern psychiatry. Psychopathic personality, however, became a widely used nosological classification. By such a term Kraepelin referred in general to the individuals we now classify as behavior problems. In this group he placed the sexually perverse, the unstable, the litigious, alcoholics, narcotic addicts, fraudulent people like swindlers, and some criminals. It is easy to see that this included only individuals whom the layman considers morally or ethically degenerate and vicious, or in other words, individuals whose behavior if mild was treated by moral exhortation and if severe by the criminal court. It was certainly an advance to consider these individuals psychiatrically. Besides Kraepelin's concept of the psychopathic personality other similar concepts like those of "moral imbecile," "moral idiot," and "moral insanity" are found in the literature. The term "psychopath" or "psychopathic personality" is, however, misleading. Etymologically it means "mentally sick," as in the word psychopathological, where actually the sickness of these individuals is usually concerned with alloplastic rather than autoplastic behavior problems. The disordered character seldom is mentally sick in the sense of being neurotic or psychotic; rather the internal disharmony in his personality is projected into action. He gets drunk and ends in the police court, he forges checks, he repeatedly insults his employers, he cannot tell the truth, or he seduces any girl under any circumstances. He does not have delusions or hallucinations or depressions or phobias. To call these individuals "moral imbeciles" is also misleading, because actually they often have very superior intelligence and insight into their behavior difficulties. No matter how clearly they foresee the consequences of their behavior, however, this has but little regulating influence on their actions. Psychoanalysis has shown that there are disordered characters who are in no way "morally degenerate" but who still present psychiatric problems in that they are unhappy or misfits or cannot make friends or hold jobs. By persons with character disorder we consequently mean those individuals whose internal unconscious conflicts lead them to become maladjusted without becoming psychotic, neurotic, or perverse. We have seen that the neurotic and perverse personalities merge gradually into what we must call normal personali-

ties. Between the normal individual and the defective character there is even less of a definite dividing line.

The damage done to the personality of the individual by the character disorders is sometimes even greater than that done by the psychoses. For this reason Bleuler (1924) writes, "Many psychopaths are really only in the social sense not 'insane,' before the forum of natural science they suffer from the same anomalies as many insane, only in a slighter degree. They are paranoid, schizoid, latent epileptics, cyclothymic, etc." He might also have added that some of these vary from the perverse only in degree, so that they are related to the sexually perverse. Others are related to the various stages of infantile development and remain infantile. The disordered character is often so near to the layman's idea of normal, however, that a few examples are in order before we describe the psychoanalytic theory of the structure of the personality of the disordered character.

All of us have known individuals with character disorders. Some years ago the author had occasion to interview a young woman student of eighteen. She had been drinking and going to beer parlors since she was twelve. She had had sexual relationships with nearly twenty men. She had had two abortions within the last two years. At the time of the interview she was having sexual relationships with two individuals, mutual friends, often in the same evening. She was insulting and sharp-tongued about the house. One might think this young woman was a child of the gutter, but actually she came from upper-class parents who were well educated and had the highest ethical ideals. Everything had been done for her. Most individuals have met persons of this kind and have considered them simply "bad" or morally irresponsible. To the person trained in modern psychodynamic theory the young woman in question was a neurotic character, who, despite her high intelligence, could not control her underlying erotic and aggressive urges. Psychiatric examination of the girl and her parents indicated that the superficially moral and perfect family life had actually been marred by brutal scenes and lack of affection between parents and child. The young woman was not a "happy sinner" but rather an unhappy individual driven to seek the love she should have had from her father in every man whom she met and, similarly, working out the resentment she felt against her father with her aggressive infidelity to her various lovers.

Take the case of the similar type of personality in the male. Mr. X has three times in his career been worth more than a million dollars, has had three beautiful young wives, all of whom have had to divorce him, and, at the age of forty, is drinking himself to death. He is good-looking and intelligent. He used to work hard as an investment banker. He would work hard to get rich, fall in love, marry, and have what to all his friends seemed a perfect economic, social, and emotional adjustment. It was, however, as if he could not stand success. He would begin drinking, become maritally unfaithful, start neglecting his business, and be back where he started, usually considerably scarred in the psychological sense from the rise and fall. His first wife divorced him when he began to bring prostitutes into the home and flaunt his behavior before both wife and children. His second wife divorced him when in a drunken rage he broke a chair over her back. His third wife divorced him when he began to spend on chorus girls the insurance he was building up for his children's education. Most of his friends looked on him as a happy-go-lucky, daredevil sort of a fellow who occasionally fell into bad luck in his business, began to dissipate for that reason, and who, as a result, got into marital difficulties. To the psychiatrist he was quite obviously trying to destroy himself.

But not all disordered characters are of the "wild" sort. Many of them seem all too inhibited, too "goody-goody." The author recently interviewed a young man who had been an excellent student of physics and had nearly completed work for a doctor's degree in this subject. Suddenly he began to lose interest and wished to withdraw from the university. In this connection he consulted the writer. One might have thought from his attitude that the young man was going to develop a schizophrenic psychosis, but he showed absolutely no pathology of the cognitive processes. Despite the fact that he was intelligent and really rather handsome, this individual at the time had no friends nor had he ever had any. He was twenty-two years of age and had never had a date with a girl. He was living on a campus where there were some two thousand other young men and he knew none of them intimately. He had neither admiration nor affection for his parents nor for any of his relatives. His only activity outside studies had been reading literature and occasionally going alone to the moving pictures. He spent a great deal of time in daydreaming but not of a psychotic sort. He was perfectly rational about the daydreaming, knew that it was fantasy,

and had considerable insight into the role it played in his psychological adaptations. He lost interest in study when it came close to his graduation, *i.e.*, when he might have had to use his knowledge in contact with other individuals. Whereas most of his acquaintances probably thought him shy, backward, a bookworm, to the psychiatrist he was an example of a schizoid personality. Undoubtedly many of our mathematicians and other theoreticians in science are just as shy and withdrawn as this young man, and their scientific activity may be looked on, just as this young man's, as a sublimation. They are, however, engaged in socially useful work and for that reason are not to be looked on as having character disorders. This young man was schizoid in his character because he could not allow himself the possibility of giving away anything of himself, even to society at large in the impersonal form of scientific achievement. The basic emotional pattern of his life was that he loved himself so much he could give love to no one else.

Disordered characters are not only the "wild" and the "queer" ones, but include also the antisocial, the criminals, and the gangsters, and even such anomalies as the chronic practical joker or those who establish queer philanthropies. Many of the bandits and gangsters we are constantly reading of in the newspapers are examples of disordered characters. Dillinger was such a disordered character; so are Al Capone and the numerous other American gangsters. Don Quixote and Tyl Eulenspiegel and Robin Hood are literary or historical figures that fall in this category.

2. The Psychoanalytic Theory of Character Disorder

According to psychoanalysis the psychopathic personality or character disorder represents a disharmony between the adjustment of the ego, the id, and the superego, and reality, or an inharmonious combination of these factors. The character disorder differs from the psychosis or psychoneurosis in that although external conflict leads to regression and unconscious conflict this conflict is worked out on the environment rather than within the self. The symptoms are thus *alloplastic*. The disordered character differs from the perverse in that the ego will not accept the infantile libidinal and aggressive urges in their original form. It is, of course, impossible to draw any strict dividing line between normality, psychosis, perversion, and the character disorder. Thus the young woman whom we described above as being a neurotic character would have been psychotic had

TABLE 12

	Nature of internal conflict	Social nature of resultant behavior	Degree of regression	Relation of basic urges of love object	Resolution of conflict results in
Character disorder	Extremely inharmonious balance as in psychosis and neurosis. The break with reality is in motor rather than cognitive spheres	Behavior socially unacceptable. Impulses break through as behavior problems in a disguised form	Regression to various stages but cognitive ego not regressed. (For individual diseases, *cf.* Table 2)	Ambivalent	Alloplastic symptoms, particularly destructive behavior
Normal	Harmonious balance between ego, superego, id, and outside reality	Behavior in all spheres constructive and socially acceptable	None. Genital stage reached	Postambivalent. Some urges gratified, others sublimated	No conflict
Psychosis	Extremely inharmonious balance in ego, superego, id, and outside reality. Ego powerless or weak against id and breaks with reality. Superego projected or taken over by ego or oversevere	Socially unacceptable behavior in both motor and cognitive spheres. Id impulses break through in a disguised form	To at least the early anal, thus beyond the level of reality testing. (For individual diseases, *cf.* Table 2)	Objectless or extremely ambivalent	Severe symptom formation in cognitive and motor spheres
Psychoneurosis	Inharmonious balance in ego, superego, id, and reality. Ego in conflict with superego and id but ego on side of reality	Behavior only partially acceptable. Destructive in both motor and cognitive spheres but id impulses checked	To late anal or phallic; thus not beyond the level of reality testing. (For individual diseases, *cf.* Table 2)	Ambivalent	Autoplastic symptoms, particularly anxiety
Sexual perversion	Balance may be either harmonious or inharmonious; no break with reality, but with sexual mores	Behavior socially unacceptable but person "normal" except in sexual sphere	Unless combined with psychosis, neurosis, or genius, there is fixation rather than regression. (For individual diseases, *cf.* Table 2)	May be postambivalent in homosexuality. Other cases ambivalent	Perverse sexual practices

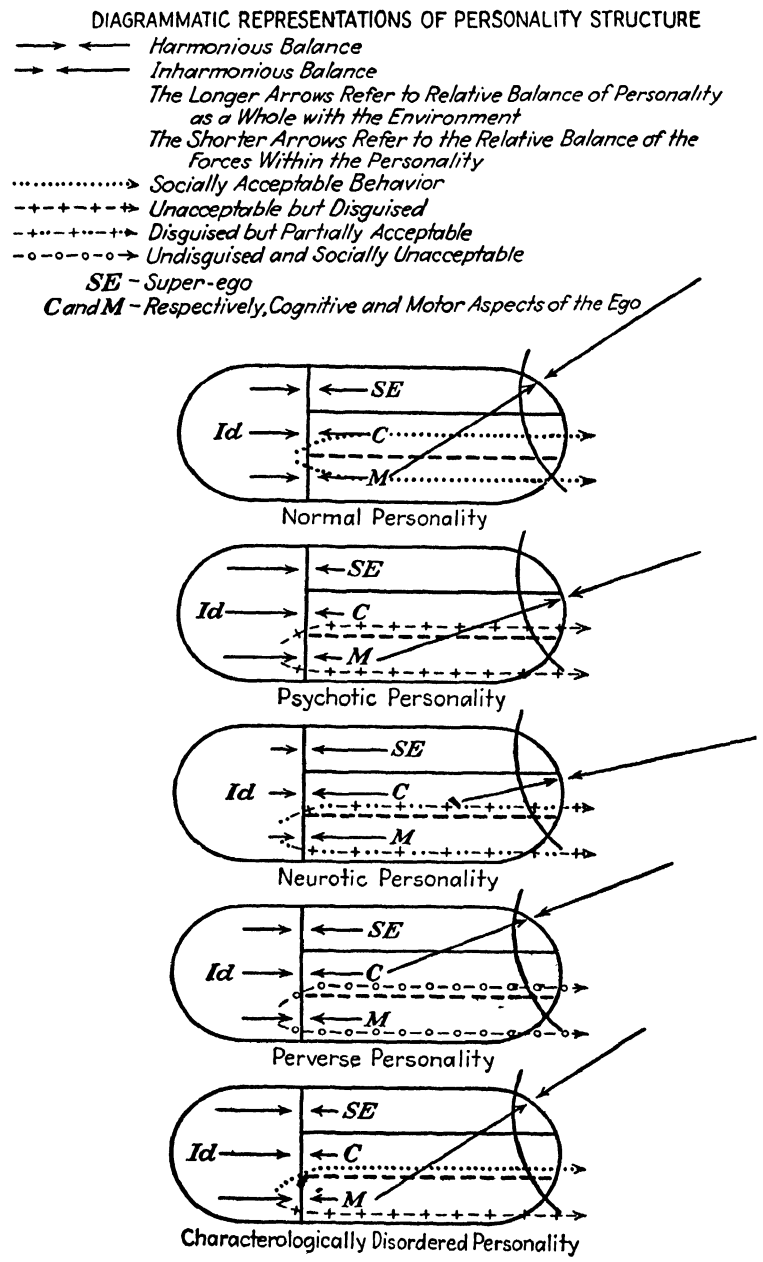


FIG. 13.—Comparing a character disorder with the other personality types.

her actual sexual adventures been imagined in the form of schizophrenic delusions. She would have been classified as perverse if the sexual behavior in which she had indulged had been either homosexual or of a form other than normal coitus, and we might even have considered her normal if instead of the many love affairs she had had but few. She could, of course, be classified as a nymphomaniac in certain aspects of her behavior. Similarly, the young physicist would have been a paranoid schizophrenic if he had developed a new and irrational mathematical theory of the universe and had suspected that other people were attempting to steal his inventions. He would have been considered perverse if his narcissistic libidinal urges had forced him to be homosexually seduced by other men or if he had engaged in a great deal of compulsive masturbation. Had he been willing to go on to his degree and accept a research or teaching position in society, we might even have considered him normal. In Table 12 and Fig. 13, we give a schematic representation of the personality structure in disordered characters. Again these will best be understood by a comparison with the earlier schemata, which are also included. Since character disorders are related to infantile fixations, to the psychoses and neuroses, and to perversion, their definition is difficult in terms of the concepts we have used for the other types. Table 12 and Fig. 13 describe the "neurotic character" as an example.

3. Character Disorders Related to Infantile Sexual Fixation

In Chap. XI we discussed how certain "normal" character traits are established in the earlier period of psychosexual genesis. We also spoke there of constellations of character traits such as oral, anal, and phallic. The normal character is thus "determined" in the earliest years. We all have similar infantile experiences, and most of us in one respect or another have certain weaknesses of character. The person who technically has a character defect, however, is one who is in need of psychiatric treatment either because his character defect makes him and his family miserable or because through his character defect he comes into conflict with organized society. One might gain the idea from all this that the psychiatrist only considered as "normal" and "well-adjusted" the extremely mediocre personality. This is in a sense true, but, since the psychiatrist is not concerned with moral evaluation but rather with attempting to lead people into socially adjusted personal interrela-

tionships, the accusation loses most of its meaning. Most of the difficult work in the world is, as a matter of fact, done by people who are in some way abnormal in the technical psychiatric sense.

Since the literature on character disorder is so new and also covers such a wide range of behavior problems, it will be obvious that we cannot deal with it in any detail here. Various nosological schemata have been devised in recent years and each of these has some methodological weakness. We shall attempt a new schema of classification of the character defects,[1] which seems the best we can do at the present time. We shall divide character defects into those primarily related to infantile sexual fixations, those primarily related to psychosis and neurosis, and those primarily related to perversion. Table 2 (page 206) gives the names of the various disordered characters on the basis of the depth of regression and our classificatory scheme. The character disorders primarily related to infantile sexual fixation include those individuals whose sickness consists basically in the fact that, while they have gone through the various phases of normal development, certain factors in the oral or the anal or the phallic period have been unduly emphasized. Among the character disorders related to psychosis and neurosis belong individuals whose behavior approaches that of the actually psychotic or psychoneurotic without actually falling into these categories. They will include characters whose individual behavior approaches mental disease but who still retain cognitive contact with reality. In the character disorders related to perversion we shall be concerned with individuals who have strong perverse sexual impulses, which, however, remain unconscious but find an outlet in the antisocial acts of the individual. Of course, since both the perversions and the mental illnesses are in themselves closely connected with infantile sexual fixations, this division is rather arbitrary. In general we can think of these character types as individuals who simply exaggerate the normal traits that are in all of us.

We have already seen how many of the normal adult reaction forms are determined respectively in the oral, anal, and phallic periods. The characterological defects primarily related to infantile sex fixations hence represent simply an exaggeration of some of these behaviors. Thus, for instance, individuals who are never "weaned," who are never able to stand on their own feet, who think that the world owes them a living, have an overemphasis in the oral sucking

[1] This schema was first suggested to the author by Dr. Robert P. Knight.

stage and so what one may call the early oral or *parasitic character* is evolved. Similarly, individuals whose overdevotion to ideas of duty make them relentlessly severe in carrying out the dictates of conscience, to the extent that their acts become cruel to others and destructive to themselves, may be said to have fixations of the late anal period. In this sense individuals who seek applause and adulation to an abnormal extent have strong fixations at the phallic level. Let us deal with these various types in more detail.

The oral-dependent character type is the individual so dependent that he never stands up for himself. His character is chiefly formed in the preambivalent oral sucking period, and his world outlook is that of the unweaned infant. He is inclined to be happy-go-lucky, optimistic, and emotionally immature in that the serious things of life never affect him. Undoubtedly many of the ne'er-do-wells and many alcoholic addicts belong in this category. The type has also been called the infantile type in that the whole behavior of the personality is dominated by the pleasure principle and no sense of reality is ever established. Naturally enough a great deal of the real life behavior of these individuals is at an adult level. Sometimes they are intellectually quite brilliant, but they still drift through life without actually accomplishing much because their basic attitude is more or less that of passive dependence upon the world. Such individuals are in no way mentally disturbed, and the layman is inclined to look on them as either morally deficient or pathologically lazy. The usual treatment of such individuals through punishment and threat avails very little because these oral-dependent characters are actually sick. The concept of the oral-dependent character accounts for the many individuals who go through life without any ambition and fail to obtain the goals their families and friends expect from them.

If the fixation or traumatic experience is connected with the late oral or oral-sadistic stage the personality is quite different. In the late oral stage the sadistic element of oral behavior develops. And this sadism in place of passive dependence makes the late oral-sadistic character in many ways the characterological opposite of the early oral character. The basic reaction is one of pessimistic distrust of the world. The world still owes the individual a living but instead of viewing it optimistically he is inclined to blame the world for everything unpleasant which happens to him. Instead of being easygoing, he is cantankerous, contemptuous, petulant. Instead of

feeling that everything is right with the world, he is inclined to find everything wrong with it. Such individuals go through life making enemies instead of friends and constantly blame the other fellow for their shortcomings in accomplishment. Their social attitude is overdemanding and they are emotionally soured with the real world. These individuals are primarily narcissistic and still infantile in their reactions because at the late oral period no sense of social responsibility has been established. They become the perpetually discontented, moody people of unhappy temperament. This they certainly are, but moral exhortation does little for them.

Certain character disorders are determined by a strong fixation at the anal expulsive period. The so-called anal character was the one early (first) studied by Freud (1924*a*, Vol. II) and his followers, particularly Abraham (1927), and is undoubtedly the one for which we have the clearest theoretical conceptions. Again, anal characters are quite phenotypically different in their behavior, depending upon whether the fixation is in the anal expulsive period or in the anal retentive period. The character traits of the anal expulsive period are chiefly those of megalomania and suspiciousness, coupled usually with an undue interest in money. The individual who constantly is extremely conceited, very ambitious, and makes unwarranted claims upon his own abilities but who is inclined to attribute his failures to the jealousy of rivals is a personality determined chiefly by fixations in the anal expulsive period. Such individuals are closely related to the paranoid characters, on the one hand, and to homosexual characters, on the other. They are the individuals who develop peculiar theories or peculiar hobbies and who not only bear grudges against other individuals in the field but who also believe that the true reason their real worth is not realized is the jealousy of others. Psychoanalysts derive these character traits from the megalomania connected with early consciousness of sphincter control and from the reaction formation against the homosexuality of this period.

The late anal or anal retentive character is marked usually by overmeticulousness to the extent of hair-splitting pedantry. This usually leads to a devotion to the written line of duty no matter what the cost in personal or social happiness. These individuals are usually petulant, cantankerous, and quick to rage, and many of them have an undue interest in collecting things, quite often money, so that they have been called parsimonious. This character comes at about

the time of reality testing and these are individuals who are always torn between strong components of the pleasure principle and the emerging components of the superego and reality principle. Their hair-splitting doubting and pedantry come from their inability to mediate between these two types of impulses. These are of course related to the compulsion neurotics. Fenichel has described these individuals as in a constant conflict between, "I want to be naughty" and "I must be good." The petulance and cantankerousness in their behavior come from the resentment against the world which has made them give up these infantile modes of sex gratification, and their tendency to hoard comes from their unconscious substitution of money for feces. As examples we find many individuals who are petty tyrants in industry, schoolmasters who are overzealous in their demand on rigid discipline, individuals in all walks of life who must have things done in a very precise way and consequently seem rigid characters to their fellow men. Such individuals are looked on by the layman as queer, unhappy personalities, but to the psychiatrist they are sick. Actually, as we saw in Chap. X, the anal expulsive and anal retentive stages overlap, and we seldom find clear-cut anal retentive or anal expulsive characters but rather a mixture of both.

The final stage of psychosexual development is also divided into two phases. The phallic phase is the period of narcissistic sexuality where, as we have already seen, the libidinal relationships are concerned with a sexual partner of the opposite sex but in a narcissistic, selfish fashion. The individual who must be the leader under any circumstances, who must always stand out before any group, who reacts unduly badly in the face of the slightest defeat is the individual with strong phallic fixations. The phallic character thus described is related to the hysteroid character, on the one hand, in that he is inclined to have the temper tantrums of hysteria and may develop certain conversion symptoms and to the neurotic character, on the other, in that he is inclined to demand gratification of his id impulse and may be close to sexual perversion. Such individuals are, of course, so close to normal that their sickness is rarely detected by the layman. To the layman they may be simply overambitious, exhibitionistic braggarts. Usually, however, on closer psychological examination it is found that they, too, are unhappy and sick.

The true genital character need not concern us much because it gives rise to theoretical normal behavior. We have already dis-

cussed this character type in Chap. XI. It is an ideal personality in actuality seldom encountered.

We seldom find pure character disorders of the types of which we have spoken. Usually there are present in the same individual strong orally determined personality character disorders with less striking anal- and phallic-determined ones, or strong anally determined character defects with the others less striking. The transition to perversion or mental illness, on the one hand, and to complete normality, on the other, is also a gradual one. Only in extreme cases is psychiatric treatment indicated for these individuals. Although the world could get along well without the oral-dependent characters, these individuals themselves are often happy. Perhaps the world could not get along without the cranks and petty tyrants and psychological exhibitionists. At all events, the cranks and exhibitionists sometimes really accomplish a great deal, and even if they do not accomplish much they make the world a more colorful place to live in. In the more extreme cases these characterologically disordered individuals are so personally unhappy or make their associates so unhappy or perform such antisocial acts that they should receive psychiatric treatment.

4. Character Defects Related to Psychosis and Psychoneurosis

We have already seen that schizophrenia is the most frequent and most severe of the major functional psychoses. Many individuals who are not actually schizophrenic are nevertheless so queer, so withdrawn from reality, so isolated from normal libidinal relationships with others that, although their contacts with reality on the surface remain undisturbed, their emotional reactions to real situations are so inadequate that they closely approach schizophrenia. Such individuals we call schizoid characters. Thus, as we have seen, the case of the young physicist who had never had a close friend and who had never had libidinal relationship with a girl is an example of a schizoid character. We do not have to spend a great deal of time in describing the schizoid character because what it amounts to is a mild or attenuated form of schizophrenia. The individual has an emotional schizophrenia without any disturbance in the cognitive and perceptual processes. He may correctly *perceive* the nature of the world but he never correctly *feels* the nature of the social world. The individuals without friends, without normal

libidinal and social relationships, without real interest in people may be said to be schizoid characters. Sometimes they break down into a real schizophrenia, but otherwise they go through life simply being isolated, queer, and schizoid. They still may accomplish quite a great deal. Many writers, mathematicians, and research workers in science belong in this category. Although some of them make successful adjustments others remain very unhappy. These cases can undoubtedly be helped by psychiatric treatment and psychoanalysis.

By the *cycloid character* we mean those characters who show the emotional symptoms of the manic-depressive psychosis in an attenuated form. Just as the schizoid character was to be looked on as a mild or attenuated form of schizophrenia, the cycloid character represents an attenuated manic-depressive psychosis. All of us to a great or lesser extent have fluctuations in moods of elation or depression, and in but few of us are these fluctuations completely connected with the objective life situation. But the cycloid character suffers fluctuations of mood much more severe than those of the normal individual. He will have periods of time when he is very productive, very gay, very happy, able to work with a great deal of push, when his objective life situation is really quite unfavorable, and he will have other periods when the life situation may be very favorable where he is continually depressed, feels the future has little to offer, feels he can accomplish nothing. We know the cycloid character is related to the manic-depressive psychosis, because in the cycloid character these deviations in mood follow in sequence.

One also finds individuals who are close to paranoia but who do not become psychotic. These are individuals who suffer from *ideas* of grandeur and *ideas* of persecution rather than *delusions* of grandeur and *delusions* of persecution. In other words, they have a sure belief in their own extreme competence and also a marked hostility toward other individuals which they project onto the other individuals and rationalize the idea that the others are hostile to them. Perhaps of all the character defects related to psychosis the *paranoid character* is the most frequent, and it is the most difficult to draw the line between the paranoid character and paranoia. We saw that owing to the systematized nature of delusions in paranoia the detection of paranoiacs was a very difficult matter. It is furthermore also hard to draw the line between delusions of grandeur and persecution and ideas of grandeur and persecution. The paranoid

character is the person with a pet idea who is unduly suspicious of others. Many paranoid characters are individuals who engage in unnecessary lawsuits, who are inclined to go to court on the slightest provocation. Legal history abounds with cases of individuals who have destroyed their personal fortunes in fighting for crank causes in the courts. Sometimes judges realize the nature of such a psychopathological process, but probably more frequently they do not. The many overly contemptuous individuals, the individuals who are always getting into fights for what are very often minor causes, are paranoid characters. In fact, most of the cranks, most of the faddists, most individuals who are realized to be a little "crazy" about one thing or another on examination are found to be paranoid characters. Undoubtedly from paranoid characters has come much of the systematic research in science and much of the first-rate work in art and literature, and certainly all of them are by no means problems for psychiatry. Insofar as they become antisocial or unhappy, however, they become psychiatric problems.

Individuals suffering from the *compulsive character* are individuals who suffer from a mild form of compulsion neurosis. As in the compulsion neurosis the individual is driven to perform acts and to entertain ideas which he realizes are morbid and out of contact with reality, so the compulsive character is driven to entertain ideas and to perform acts which may or may not be socially useful. When the acts are socially useful we have the very productive workers in the arts, the sciences, and in industry. When the acts are completely meaningless with regard to social reality we have the compulsion neurotic. The compulsive character then covers the range of compulsive behavior from that of the individual who has to count every fence post on his walks and who has to notice the numbers of every bank note that comes into his hands and who has always to walk in the middle of the street, to the individual who has to work overtime in his position and who consequently makes good. The behavior similarly ranges from that of the deeply neurotic individual to that of the very successful productive individual. Almost always present in the compulsive character besides the compulsion to do things is the presence of obsessive doubting. Doubts about the correctness of this action, whether he should do this, that, or the other thing at a certain time, etc. This hair-splitting doubt of the compulsive character is related of course to the feeling, "I want to be bad, but I must be good" of the anal character and of the true compulsion

neurotic. This obsessive doubting also arises from the ambivalence of the late anal period and from the uncertain sexuality of the late anal period. The inability to decide what activity to undertake is connected with the inability to decide on one's sexuality.

Similarly we have *hysterical characters*, who tend to develop hypochondriasis and infantile behavior similar to real hysteria, without developing an overt neurosis. If the outstanding symptoms are closer to actual hysteria than to the phallic character as we have described it or to the neurotic character which we shall next describe, the individual is to be classified as a hysterical character.

The reader will see that there is no sharp break between the disordered character and the normal character, and perhaps an even less well-defined break between character disorders related to infantile sexual fixation and those related to psychosis and neurosis. For practical purposes the exact diagnosis makes no difference. It should be clear by this time that from the standpoint of modern psychiatry diagnostic categories in general represent differences in degree and not in kind. This is particularly true in the newly developed field of character disorders.

5. Character Disorders Related to Perversion

Of particular psychiatric importance is the group of character disorders which seem most closely related to abnormalities of the libidinal and hostile urges. This group most nearly approaches that of the older conception of "psychopathic personality" and most frequently engages in behaviors which are immoral or degenerate from the layman's standpoint. These individuals make wrecks of their own lives and cause great damage to their friends and loved ones and even to society at large. We saw that this group is related to perversion only in the sense that psychoneuroses are related to perversion, namely, that the symptoms of both arise as protections against the consciousness of internal conflict which arises in the pregenital development. This is what led Freud (1930) to define a neurosis as a negation of a perversion.

The concept of the *neurotic character* as it was first introduced by Alexander is perhaps the one most thoroughly developed in this field. Following examples by Freud (1924*a*, Vol. IV) and Abraham (1935*a*), Alexander was able to show how behavior disorders are closely allied to the neuroses. In the neuroses autoplastic symptoms are developed. In the neurotic character alloplastic behavior dis-

orders are developed. When Alexander originally set up the concept it was broadly applicable to nearly all character disorders. As generally used today the neurotic character refers to the individuals who "act out" upon the environment the unconscious internal conflicts. Thus the unconscious libidinal impulses tend to seek constant sexual gratification, and the unconscious guilt and introjected hostile impulses lead the individual to indulge in behaviors for which he is punished. Neurotic characters include the two types which we used as examples in beginning this chapter. They also include "people who cannot stand success," those people who always fail after success because the strong sense of guilt in connection with infantile sexuality does not allow them to succeed. In this category fall many "criminals out of a sense of guilt." These individuals perpetrate crimes in order to be punished and thus assuage internal guilt feeling. In some ways these supposedly immoral people are overmoral but, of course, in an irrealistic sense. They sin and commit immoral acts not because they enjoy immorality but because through it they gain revenge and receive punishment. These individuals usually have disordered sexual lives. This makes us believe that they are close to perversion. The neurotic character refers to a large group of individuals whose "neuroses" consist in engaging in antisocial behavior rather than in neurotic symptoms. The same conflicts, however, underlie both the neuroses and the neurotic characters, namely, conflicts between the ego and id, where regression threatens to break down and where behavior and symptom protect the individual from the anxiety created by unconscious conflict.

Neurotic characters are closely related to criminals, impostors, sexual perverts, alcohol and narcotic addicts, nomads, pathological spenders and liars, and individuals with a mania for gambling. In fact, many of these individuals are neurotic characters and the nature of symptomatic acting out is quite obvious.

Since neurotic characters present such an important psychiatric problem, the question of prognosis and therapy is important. Moral exhortation and punishment are completely unsuccessful. Actually the conflicts which the subject is acting out are *unconscious* conflicts. Psychotherapy is hence indicated. Alexander (1930*b*) feels that psychoanalysis should be particularly successful here because of the lack of autoplastic neurotic suffering and the ability of the patient to react to reality. Other authorities, for instance, Fenichel, disagree with him rather sharply here. The nature of the individual case is important. There are many good descriptions of neurotic char-

acters in the psychoanalytic literature. Freud (1924*a*), Abraham (1935*a*), and Alexander (1930*b*) are all worth reading on this topic. K. Menninger's book "Man against Himself" gives many good case histories of neurotic characters.

Closely related but not identical to the conception of the neurotic character are the concepts: impulse-ridden character, the fraudulent character, and the inhibited character. An exact description of these would take us beyond the limits set for this book, and the interested reader must go to the original literature which is referred to at the end of this chapter.

6. Alcohol Addiction

Related to neurotic characters but having also specific etiological factors are the chronic alcohol addicts. In contemporary America these individuals present a particularly challenging psychiatric problem. Of the many alcoholics only a few develop psychoses and get psychiatric care. Still, nearly 5 per cent of all new admissions to state hospitals are individuals suffering a psychosis due to alcoholism and an additional 7 per cent suffer from chronic alcoholism. It is very difficult to get figures on chronic alcohol addiction, but there is no doubt that it is a very frequent disease. In some social classes —the upper bourgeois and the lower proletariat—there is small doubt that a very large percentage of the males and a fairly large percentage of the females are alcoholic. Alcoholism leads to both economic and social maladjustments which are so well known that we need not go into them.

Psychiatrists are not concerned with the social and moderate use of alcohol. For many individuals the moderate use of alcohol is really advisable and for others even its occasional abuse offers a necessary psychological analgesic, nor does the psychiatrist consider everyone who drinks or everyone who drinks too much a psychiatric problem. Some individuals who drink every day lead happy and successful lives. The alcoholic in the psychiatric sense is one who through his drinking creates unhappiness for himself and other individuals and whose drinking is compulsive. In other words, he is an individual who has a conflict as to whether he shall drink or not and sometimes he has to have a drink when his better judgment tells him to refrain. He also tends to use alcohol in increasingly large doses. From his alcoholism or rather with his alcoholism his efficiency in economic and social relationships is diminished. He loses jobs and quarrels with his friends and family.

The alcoholic fits into the general category of neurotic character. The drinking and drunken behavior is an alloplastic behavior maladjustment which arises from internal unconscious conflict. There are specific factors in the etiology of alcoholism which have been worked out most precisely by Knight (1937*a*, *b*). There are strong oral-demanding character traits. Thus alcohol represents unconsciously the mother's milk. There are definite self-destructive and self-punitive motives in the behavior. Karl Menninger (1938) has shown how these work. The alcoholic is also related to the sexually perverse in that he has strong unconscious homosexual components in his libido. Actually attenuated forms of homosexuality come out in all stag drinking parties.

Since the use of alcohol is socially permissible in some circles and socially demanded in others, in alcoholism social factors are of great importance. This must be considered in discussion of the prognosis. As long as drinking is considered the thing to do, alcoholics will not look on themselves as sick.

Concerning the prognosis for the psychological treatment of alcoholics, like all neurotic characters, there is much doubt. Durfee claims exceptional results. Knight (1937*a*, *b*) is more conservative. Here again the individual case varies greatly, and with some individuals the alcoholism seems to be the basic maladjustment and with others the alcoholism is simply a reaction against other neurotic conflicts. This second group probably respond more favorably to psychoanalytic treatment. For a more extended treatment of alcoholism the reader is referred to Durfee and Knight (1937*a*, *b*). The existent literature is reviewed by Crowley.

7. Criminality

Modern psychiatry has recently considered the criminal. Although psychiatrists realize the problem is complicated by both legal and penological factors, they believe the psychology of the criminal furnishes psychiatric problems. To develop adequately the psychiatric theory of criminality would require a separate book. In this section we shall simply point out one or two problems and refer to some of the literature.

That punishment fails to eradicate crime is a banal statement. Recently criminologists have even come to the conclusion that it is the original incarceration that makes the first offender a hardened criminal. Psychoanalysts can understand this. The superego is recriminatory and we all have need for punishment. The punish-

ment, however (*cf.* the theory of the manic-depressive psychosis), wipes out the guilt and the individual is free to sin again. Refusing to punish them might deter some criminals from further crimes. Even the most adjusted of us, however, harbor criminal—even murderous—impulses. Since we cannot condone them in ourselves, we cannot permit them to others. Consequently, the law becomes the superego of society and we demand law and order. Reform in criminal procedure is of necessity very slow, and perhaps it can never be completely accomplished. Gregory Zillboorg has made important studies in the field of the social psychology of criminal, particularly murder, trials which will be published shortly.

There are undoubtedly occasional crimes committed under economic pressure or for other rational (to the individual) reasons. These criminals are not the concern of the psychiatrist. There are also "normal" criminals—those individuals in whom criminality is a profession of choice, whose fathers were criminals, and whose superego comes from a criminal identification. These are problems for the sociologist. In American cities the gangsters often represent this type.

Probably the majority of criminals are neurotic characters. Crime does not pay economically, at least if one is caught. These individuals repeat crimes as alcoholics repeat sprees and Don Juans repeat seductions. They are criminals out of an unconscious sense of guilt or from unconscious antisocial impulses. This is particularly true of performers of criminal acts against persons (murderers, rapists, etc.) and even of large numbers of crimes against property rights. Menninger, Alexander and Staub, and Alexander and Healy have written a great deal in this field. Students of sociology will find their works well worth studying.

From the standpoint of modern psychodynamic theory, the genius is not "inspired" but develops in accordance with psychological laws. In our next chapter we shall discuss genius and thus complete the discussion of problems with which modern psychiatry deals.

Bibliographical Note

The psychoanalytic characterology is least developed. Important are the works of Reich, Freud (1934*a*, Vols. II, IV), and Alexander (1930). Other characterological schools are reviewed in Roback. There is a series of psychoanalytic character descriptions by Wittels, Lewin, Jones, et al., in the *Medical Review of Reviews*, vol. 36, 148–204, 1930. Fenichel (1934) gives a good summary of this literature.

CHAPTER XXI

GENIUS

1. Swing and the Id

Some readers may take it amiss that we start our discussion of genius with analysis of recent popular dance music of the "swing" variety. "Surely," many will say, "this is not art, and it is not the production of geniuses." From the psychological definition, however, it is art and arises from the same types of psychological conflicts as gave us the Mozart and Brahms symphonies. Our modern theories make no sharp break between "normality" and the psychoneuroses and the psychoses. These represent degree differences rather than kind differences. In the field of genius, the difference between Beethoven's Fifth Symphony and Benny Goodman's "Opus ½" is again one of degree, and not of kind. So for our purposes swing may be considered art. It is a particularly good subject with which to illustrate the theory of genius to students for several reasons. In the first place it is a folk art, so that nearly every reader of this book will be familiar with it. In the second place, the conflicts which are its subject matter are conscious conflicts or lie close to the conscious and are for this reason familiar. In the third place, the phraseology used in the sublimations is easily understandable and is not particularly sophisticated. Thus the analysis of popular songs will be easier than the analysis of Wagner's "Ring." For all these reasons, we start with it. First let us show the nature of the conflicts in a few lyrics.

"Fall in love, fall in love, says my heart. . . . but each time that I'm almost in your arms, this old schoolteacher brain of mine starts ringing false alarms." Translated into technical language, this is a description of a superego and id conflict. These lines from a recent popular song epitomize a great deal of what this book is about. Personality growth comes about through the modification of basic urges (arising in the id) by social barriers (which become introjected into the person as the superego). Leaving the question open as

to whether or not such a song as "Says My Heart" is art on a very high level, its lyric is quite obviously concerned with a basic human conflict. The song writer expressed this thought from his own internal needs and so helped resolve his own conflicts by sublimation. We listen to it or dance to it and reduce our own internal conflicts by identification and sublimation. In some cases undoubtedly the music and dancing lead to love-making and thus are generative of conflict as well as being sublimated resolutions of it.

Freud's (1924*a*, Vol. III) first published report of the partial analysis of a case of conversion hysteria was the case of Dora. In a varied list of symptoms Dora had a hysterical dyspnea (breathing difficulties) and this was accompanied by an aphonia (loss of voice). Dora did not understand why these symptoms occurred in connection with a certain man, because she was unconsciously rather than consciously in love with him. The lyric of one of the recent popular songs runs, "You leave me breathless, that's all I can say. I can't say more because you take my breath away." The song writer is conscious of his conflict and he sublimates it. The patient remains unconscious of the conflict and has to protect against it by development of conversion symptoms.[1]

The genius is one who finds outlet for unconscious and semiconscious emotional conflicts through sublimation, *i.e.*, through expressing them in a disguised but socially approved form. Such sublimation reduces and partially resolves conflict. We like art, when we are able either consciously or unconsciously to relate it to our own conflicts. The unconscious of the genius is relatively "open." He perceives his own conflicts in such a way that he can present them to others and enrich their lives. The psychoanalytic theory of art thus relates art to life and considers art not related to life to be meaningless. In this way some art productions are closely related to life and conscious strivings, others are related only to the deep unconscious strivings and remain far from life, except for those people who themselves are able to perceive the depths of the unconscious. Of course, a great deal of going to art museums and concert halls comes about not because of the desire for aesthetic experience as a sublimated emotional experience but from a desire for social prestige.

[1] In both of these actual cases we have no way of knowing, of course, about actual conflicts in the song writers. The writer may really consciously be something of a psychologist and perceive their frequency in others without being subject to the identical conflict himself.

But whether one goes for the fun of it or to be seen there, interest in art, like the production of art, is caused by psychological factors.

The basic human urges are, as we have seen, concerned with love and hate objects. No one would call the direct expression of either the basic libidinal or hostile urges, art. "I love _____," or "I hate _____" are not themselves art, but they are the ground from which art and science grow. These wishes become sublimated (sometimes with a great deal of distortion) in the written words of poets, philosophers, and scientists, in the plastic productions of painters and sculptors, and in the scores of musicians. While the "I love" motive is easy to see in "Says My Heart," it requires considerable analysis to see how it becomes sublimated and distorted in the chorus of Beethoven's Ninth Symphony, but such analysis can discover it and can discover also the projected hostility in many works of art. Shakespeare's *Hamlet* is easily seen to be a dramatization of the Oedipus situation, for Hamlet's struggle is concerned with his attachment to his mother, the memory of his father, and jealousy of his stepfather. All the great madonnas in the European galleries are sublimations of the oral stage of psychosexual development.

Since many of the unconscious conflicts in all of us cannot be admitted by the ego, the process of sublimation in art *distorts* the content of the conflict and expresses it in a derivative form. Thus Shakespeare projects his own conflict onto a Danish prince and expresses this prince's conflict in magnificent poetry. In their sublimated form the expression of psychological conflicts is socially desirable. With sophistication of form and distortion of content comes the need in certain of the arts for *technical competence*, and this develops special performers (musicians and actors) who may only know the artist's conflict in the sublimated form. Thus as art disguises content, uses technically difficult and distorted expression forms, and requires special competence for its performance, it becomes "great" art. In general the more sophisticated the form, the more distorted the content, the more unique the technical competence of the performers, the "greater" the art. If the distortion of content, sophistication of form, and uniqueness of performance become so far removed from life that only very few people can still identify the art work with their own conflicts art becomes very esoteric. Extremes in esoteric art cannot be properly differentiated from psychotic productions and must be classified as symptoms

rather than sublimations. Art thus starts in life and must never become too far removed from it. The real greatness of the really great artist lies in his abilities to keep the sublimations near enough to universal conflict for them to have universal appeal. In this country in swing music we have our *first* indigenous art. Swing combines poetry with music and in it we can see very nicely how mere statements about emotions become art through sublimation. In this music we find the simplest distortion of content, the sophistication of form, and the uniqueness of performance which change mere expression of conflict into art.

An easy way to realize the growing artistry of popular music is to listen to records made in the early twenties and compare these with the latest recording of the same songs. The most striking change is in the sophistication of form, *i.e.*, in the orchestration. The older records usually gave a thinly orchestrated and purely melodic recording of the verse followed by as many *identical* repetitions of the chorus as space would allow. There is a monotony about them which becomes very tiring to the ear. They are only bearable as accompaniments to dancing. The newer recordings are sets of extremely complicated variations on the melodic theme of the chorus. Some of Benny Goodman's and Bob Crosby's and Count Basie's widely swung choruses represent variations as complex as some of Brahms's. With these variations the orchestration becomes enriched so that various subsidiary melodies are integrated and amazing instrumental combinations are accomplished. The musically trained ear while finding too much swing monotonous is able to listen with pleasure to a considerable amount of it. Too much of any music, even Beethoven and particularly Wagner, becomes monotonous. Swing music is making a gradual transition to art in that people are beginning to listen to it for its own sake in swing concerts and recitals and "jam sessions." When it is combined with dancing, the directly sexually stimulating power of the music becomes obvious: heard alone it is more strictly a sublimation.

Parallel with the growing richness of orchestral accompaniment, the sophistication and distortion of content is also mirrored in the lyrics. The lyrics of twenty years ago were inclined to be rather simple statements of an amatory or nostalgic sort like those in "Smiles," "Oh, Give Me the Moonlight," "Jealous," and "Mammie." Today we have such poetically richer images as in the lyrics of "Plenty of Money and You," "My Heart Belongs to Daddy,"

"Thanks for the Memory." The references are more sophisticated. The statement is in a more derivative form.

With both these changes comes the *unique competence of performance* and the requirement of a specific virtuosity as in Goodman's clarinet, Krupa's drums, Teddy Wilson's piano, Louie Armstrong's trumpet, Tommy Dorsay's trombone. Not only is competence demanded of the individual instrumentalist, but the ensemble work becomes more difficult and complicated. Certain of Goodman's and Bob Crosby's recordings indicate an integration of single instruments into complicated harmonic and rhythmic effects which were simply unknown in so-called "aesthetic music" until recently. As in all dance music, the rhythms remain of the greatest importance.

What the future of swing will be one cannot say. As it becomes increasingly sublimated from the love-making of the dance, fewer individuals will be able to follow it directly and it will become more esoteric. At the present, it remains close enough to certain real adolescent conflicts to be very popular with students and so serves as an excellent illustration of the psychological theory of art.

In the lyrics of swing music are to be found illustrations of nearly all the conflict situations we have discussed in this work. In general the conflicts are concerned with heterosexual premarital and hence usually frustrated love. Probably 80 per cent of the titles belong in this category, and so no illustrations are necessary. Other conflictual mechanisms are frequently shown, however. The Oedipus situation appears frequently. The love of the child for the parents is enlarged in all the "Mammie" and "Daddy" songs and the love of the parents for the child in all the "Sonny Boy" and "Shirley Temple" songs. The fact that genital heterosexual choices are somewhat determined in the Oedipus situation comes out in songs like, "You Remind Me of My Mother" and incidentally in the appellations of "mama," "baby," "daddy," which occur so frequently in many of the heterosexual love pleas. Song writers for years have intuitively felt the significance of dreams in titles like "You Can't Stop Me from Dreaming," "I'll See You in My Dreams," "I Wake Up Smiling." The overevaluation of the love object appears quite clearly in "What Have You Got That Gets Me" and "Bill," to mention only two titles. The concept of two sorts of love, sacred and profane, which characterizes phallic genitality occurs quite obviously in "Body and Soul" and "Why Not Take

All of Me." The lyrics of popular songs thus express the facts of psychoanalytic theory in a very slightly sublimated form.

Heterosexual genital love is socially permissible and these songs are folk songs based on conscious or semiconscious conflict. Consequently they are largely concerned with heterosexual genital love. But in a sublimated form homosexuality also appears in songs like "My Buddy" and "That Old Gang of Mine." Hostility occurs openly in popular songs of wartimes, "We'll Hang the Kaiser," and in popular songs about the class struggle. In general, however, society represses ingroup hostility and since the popular song is concerned with libidinal social intercourse expression of hostility is rare. If we diverge for a moment from swing we can find plenty of expression of aggression in what are sometimes called America's other two indigenous arts, the comic strip and the animated cartoon. The reader can convince himself of this by watching for the evidences of aggressivity and hostility the next time he opens the paper to Moon Mullins (or for that matter practically any of the other comic strips) or sees a Walt Disney cartoon (or for that matter any of the other animated cartoons).

We have said nothing about the psychological factors in the playing of swing or the dancing to it. It would be interesting to continue our analysis and show the presence of sublimated erotic and hostile urges in both. Examples are easy to find. "Caressing the keys" and "beating the drum" and "squeezing the trumpet" and "teasing the licorice stick" are vernaculars with regard to playing. "Getting hot" and "burning the carpet" are vernaculars with regard to the dancing. With this much background the reader who is familiar with swing music may work this aspect of the psychology of art out for himself.

Truly great art is often said to be moral. By this is meant that it resolves conflicts through sublimation in such a way that societal ideals are upheld. In other words, the artist sublimates in a socially valuable form and the audience identifies himself in this sublimation. Thus art becomes a powerful ally of the superego in the struggle between biological urges and social frustrations. It often glorifies and celebrates the existing or the developing social mores and social order. Pre-Raphaelite painting is concerned with the celebration of the Christian medieval culture while post-Raphaelite painting foresees the development of the Renaissance humanism and the

baroque science. The Beethoven symphonies are concerned with individualism and democracy. Thus there are important cultural as well as psychological factors in art. The superego is more heavily weighted with cultural factors than the other constituent parts of the self. In this way great art may be said to be moral so far as it is art with a superego.

In swing music the superego appears in very personal ways in many popular songs. "I'm Sorry I Made You Cry" shows the self-punitive superego at work, and it appears in much the same role in all the "blues" songs. "I Cried for You" states the depressed form of a mild manic-depressive cycle where introjected hostility and punitive superego undoubtedly play a role. It is nicely followed by the manic phase, "Now It's Your Turn to Cry Over Me." The superego so designated is quite personal, however. In war songs and in social class songs we have perhaps some more indication of social superego. Most popular songs have little and for this reason many musical critics refuse to call swing art. The author still believes it to be art but an art without superego.

Art without superego may still serve a definite function, particularly in times of cultural crisis such as the present. In his very important essay, *Civilization and Its Discontents* (1930*b*), Freud points out the psychological reasons for our present crisis. The complexity of modern industrial society forces us more and more to renounce basic instinctual urges. The increasing cost of socialization in repression of basic urges hangs together with the complexity of modern life. Swing music allows some sublimated outlet to libidinal urges and in this way makes life in contemporary society more bearable. This is what art has done in all ages and what makes art necessary and defendable.

2. Psychoanalytic Theory of Genius

The productions of the genius represent sublimated, *i.e.*, socially acceptable, resolutions of unconscious conflict. Thus in their sources the productions of genius are related to the productions of the normal, the psychotic, the neurotic, and the disordered character. They are similar to all these in that there is a disbalance between the forces of the id, the ego, and the superego, and reality. They are different in that the resulting behavior is viewed differently by society. We shall see shortly that many genuises have also been neurotic and that the genius is closely related to the neurotic. We

shall also see that many contemporary geniuses would be adjudged neurotic or even psychotic in different cultures. In some ways, however, the genius is more like the psychotic. The *sublimation* of unconscious conflict in his productions is a parallel to the symptom-formation of the psychotic. The neurotic symptoms protect against the conflicts. The genius is thus outstanding in one very special respect. *His repressions are not severe enough to prevent his being somewhat conscious of the nature of the basic instinctual conflicts.* It is this knowledge which allows him to sublimate (*i.e.*, to distort, to sophisticate, to make unique) his conflicts in a form which allows other individuals to identify their own conflict with the artist's. From this come both the enjoyment and the cathartic effect of art for the audience.

The psychoanalytic theory of genius is not so satisfactory as that of the other categories. However unhappy and neurotic, outstanding geniuses are seldom actually analyzed and the theory has been developed largely through the analysis of documents. Furthermore, there is need for both methodological and factual clarifications of sublimation as the basic mechanism involved in genius. The concept is evaluative and depends on sociological and cultural norms to a greater extent than do many of the other psychoanalytic mechanisms. There is further the factual question of whether actual sublimation of libidinal and aggressive urges in the sense of really discharging libidinal and aggressive energy through socially constructive behavior is possible. Experiments by Lewin and his students would indicate that substitutive fulfillment of basic needs leads only to a partial resolution of underlying conflict. Freud first developed the idea of sublimation in his *Three Contributions to the Theory of Sex* in 1905. Since he has returned to the idea only occasionally. Other psychoanalysts and psychologists have written about the concept but have not subjected it to basic criticism.[1] Levey has summarized the earlier writings in his paper "A Critique of the Theory of Sublimation," which subjects this concept to its most thorough methodological and factual examination. In this paper he concludes:

Freud's theory of sublimation brought order to the earlier empirical beliefs about the subject. His concept contributed highly valuable generalizations in its description of sublimation as a vicissitude of non-repressed instinct, as an unconscious process, and one helpful in prevent-

[1] *Cf.* the summary in Levey's paper.

ing neurosis. Although important features of the concept have remained unverified and unclarified, it has proved useful as a guide to our thinking and in our therapy.

The proposition presented by this paper is not so much concerned with whether Freud's concept of the process of sublimation achieves standards prescribed by the canons of science as with the facts that the evolutionary character of psychoanalysis as a science has failed to impress itself upon this aspect of the theory, and that Freud's generalizations about sublimation have remained untested and unverified; through not regarding the concept with a perpetual tentativeness, we have neglected to revise it in accordance with metapsychological standards.

One concludes from the literature quoted that the concept of sublimation is an improved recapitulation of empirically known facts, confused, obscure, incomplete, redundant, static, and lacking in objective verification; that the most probable reason for our negligence lies in a subjectivity associated with the difficulty of the problem; and that, though we have maintained a more scientific orientation to the problem than have other schools, our tendency also has been to evade the problem rather than to attack it.

The logical conclusions are that we need to recognize and avoid the evasive techniques described; to approach the problem as one worthy of a primary interest in view of its theoretical, clinical, and social importances; and to adopt, in attempts to reconstruct the concept, the metapsychological standards which have characterized our method of attack upon other problems. [From Harry B. Levey, "A critique of the theory of sublimation," *Psychiatry*, 1939, 2, 269–270.]

In general it seems best to retain the concept of sublimation but to understand by it only the various behaviors and mental symptoms which protect against unconscious anxiety and compensate for unconscious conflict in ways which are not only permissible (as in the case of the normal) but also socially valuable. Seen from this viewpoint the genius is differentiated from the neurotic and at times even from the psychotic only on the basis of culturally determined norms. The genius resolves his conflict in a way which others value.

With these points in mind, Fig. 14 and Table 13 will be quite obvious. For comparative purposes, the other personality structures are again given.

3. The Genius and the Neurotic

That artists may be very neurotic people is, of course, commonplace knowledge. The neurotic is not able comfortably to comply

TABLE 13

	Nature of internal conflict	Social nature of resultant behavior	Degrees of regression	Relation of basic urges to love object	Resolution of conflict results in
Genius	Inharmonious balance but no break with reality	Behavior socially valued. Id impulses break through as art, science, etc.	Regression to various stages but cognitive ego not regressed and behavior valuable	Ambivalent or postambivalent with some urges sublimated	Works of art, science, etc.
Normal	Harmonious balance between ego, superego, id, and outside reality	Behavior in all spheres constructive and socially acceptable	None. Genital stage reached	Postambivalent. Some urges gratified, others sublimated	No conflict.
Psychosis	Extremely inharmonious balance in ego, superego, id, and outside reality. Ego powerless or weak against id and breaks with reality. Superego projected or taken over by ego or oversevere	Socially unacceptable behavior in both motor and cognitive spheres. Id impulses break through in a disguised form	To at least the early anal, thus beyond the level of reality testing. (For individual diseases, *cf.* Table 2)	Objectless or extremely ambivalent	Severe symptom formation in cognitive and motor spheres
Psychoneurosis	Inharmonious balance in ego, superego, id, and reality. Ego in conflict with superego and id but ego on side of reality	Behavior only partially acceptable. Destructive in both motor and cognitive spheres but id impulses checked	To late anal or phallic; thus not beyond the level of reality testing. (For individual diseases, *cf.* Table 2)	Ambivalent	Autoplastic symptoms, particularly anxiety
Sexual perversions	Balance may be either harmonious or inharmonious; no break with reality but with sexual mores	Behavior socially unacceptable but person "normal" except in sexual sphere	Unless combined with psychosis, neurosis, or genius, there is fixation rather than regression. (For individual diseases, *cf.* Table 2)	May be postambivalent in homosexuality. Other cases ambivalent	Perverse sexual practices
Character disorders	Extremely inharmonious balance, as in psychosis and neurosis. The break with reality is in motor rather than cognitive spheres	Behavior socially unacceptable. Id impulses break through as behavior problems in a disguised form	Regression to various stages but cognitive ego not regressed. (For individual diseases, *cf.* Table 2)	Ambivalent	Alloplastic symptoms, particularly destructive behaviors

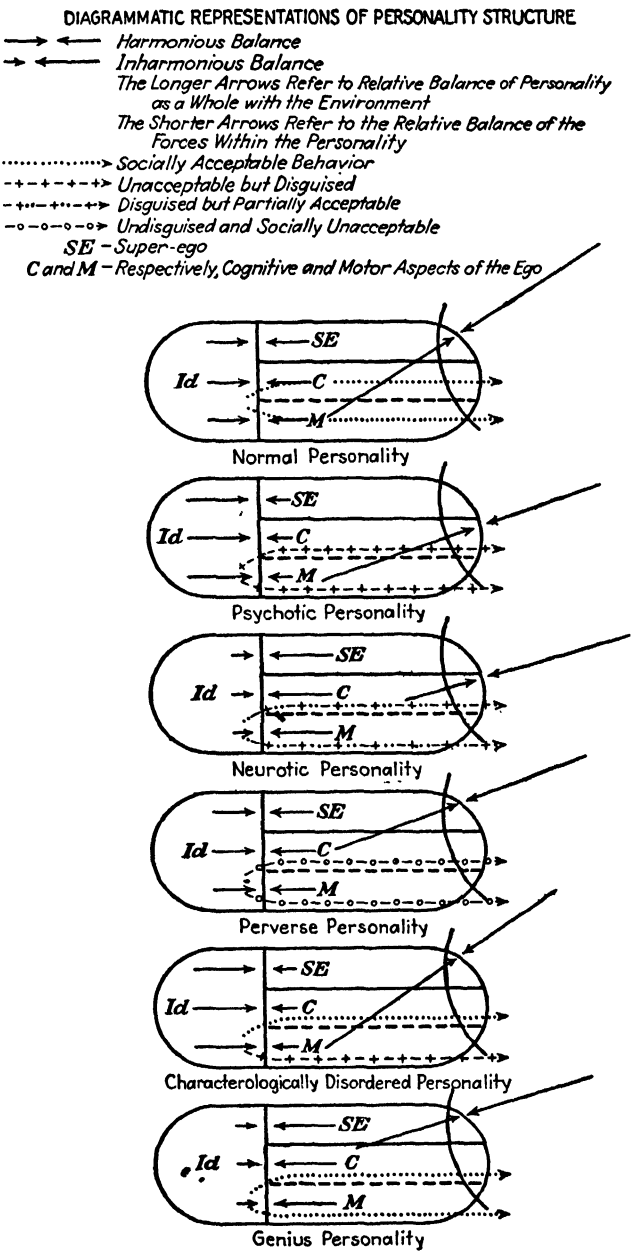


FIG. 14.—Comparing the personality structure of the genius with other types.

with the demands of social reality because of the conflicts between the id and the ego. He thus develops symptoms to protect himself against these conflicts. This makes him seem "queer." The artist is also not able to comply and his behavior is thus often at odds with the demands of social reality. Everyone realizes that many artists are rebels and nonconformers. The artist is a "bohemian," he dresses peculiarly, he drinks too much and eats irregularly, his sexual morals are not too rigid, he retires from the world. Of course, not all artists wear Windsor ties, or drink too much, or starve in garrets, or have series of mistresses, or never answer the telephone because they are producing. Many look and act very much like businessmen and these are often the most productive and greatest artists. But the fact remains that the "artistic temperament" does exist and is closely related to the neurotic temperament.

Since the same conflicts produce works of art and neurotic symptoms it is only to be expected that artists will often be nonproductive because of personal or social reasons and hence develop neurotic symptoms. Through his life the artist may also not be able to sublimate completely and consequently may always suffer neurosis. We have already seen that neurosis, psychosis, perversion, and disordered character are all related so that the behavior of the artist may have earmarks of all these behaviors. A little later we shall try to show how science and philosophy are related to art and so these remarks also refer to scientists and philosophers. In the following paragraphs we shall give examples of the various forms of psychopathological behavior in some recognized geniuses.

Many geniuses have shown signs of having character disorders for all or some of their lives. Edgar Allan Poe was certainly a chronic alcoholic, unable to make "proper marital success with any woman." Christopher Marlowe died of dissolute living at a very early age. Most of François Villon's best poetry is about his own life, which was that of a roisterer and "tosspot" and he too died before thirty. Goethe speaks of his days of *Wusstes Dasein* (dissolute living) before his journey to Italy. In our own recent literature the poet Hart Crane and the novelist Thomas Wolfe were both severely alcoholic. Poets and wine are a familiar combination. Verlaine and Baudelaire, Swinburne and Ernest Dowson and many others all found drink a problem. Many painters suffer likewise. Toulouse Lautrec and Paul Gauguin had alcoholic episodes. Nor is alcoholism infrequent in musicians. Haydn was said to be sober

but infrequently and Brahms often disappeared for days in low saloons and houses of prostitution. The only personal papers we have of Galileo are notes from a tavern. Everyone knows the widespread taste of swing musicians for alcohol. It would be easy to give many other examples of geniuses with this type of disordered character from all the arts and sciences.

Newton, who was probably the world's greatest scientific genius, was a schizoid character. Charles Darwin had definite schizoid characteristics, also. The great natural scientist Robert Julius Mayer was a cycloid character who actually developed a manic-depressive psychosis. Neurotic characters in the arts and the sciences are likewise very frequent. The great American economist Thorstein Veblen was a mild neurotic character, poets like Poe and Lord Byron were relatively severe types. Mozart's life was made up of a series of tragedies in which the neurotic elements of his character undoubtedly figured.

Undoubtedly sexual perversion is very frequent among geniuses. This does not mean that all the sexually perverse are genial by any means, nor are all the genial sexually perverse. Tschaikowsky was homosexual, Wagner was markedly bisexual, neither Beethoven nor Brahms ever married. Brahms we know could establish sexual relationships only with prostitutes. There is good evidence that Leonardo da Vinci was, if not an overt homosexual, at least an implicit one. Proust is also in this category. Oscar Wilde's homosexuality was, of course, the great scandal of British literary circles in the 1890's. Walt Whitman's bisexuality appears on nearly every page of his work. There is a great deal of evidence that both Carlisle and Ruskin were chronically impotent.

Many geniuses have suffered periods of psychosis and severe neurosis. Nietzsche died of paresis. Robert Schumann had a severe depression with schizophrenic coloring. The Scandinavian playwright Strindberg was psychotic. Van Gogh suffered a severe schizophrenia and died in an asylum. The popular surrealist painter Dali is an admitted paranoiac and has written entertainingly although superficially about the theory of paranoid art.

It would be easy to give many other examples even among contemporaries from all the fields of art and science. To mention contemporaries is, of course, impossible. If the reader keeps his eyes open among his acquaintances who are "geniuses" or "gifted" he will see many examples of neurotic behavior in them.

4. The Product of the Artist: Psychodynamic Aspects of Form and Content

The form and content of art products represent the sublimation of unconscious or semiconscious conflicts. This we have already seen with regard to popular music. The following lines will demonstrate the propositions stated there for the other arts. Most of our examples will be chosen from literature, but enough examples from the plastic arts will be given to illustrate that the same mechanisms are at work there too. That the Oedipus situation has been important in motivating great works of literature is of course commonplace knowledge. The technical name Oedipus situation itself is adapted from the Greek tragedy *Oedipus Rex* by Sophocles. This tragedy, considered the greatest of all antiquity, is concerned with the unwitting murder of Laius, his father, by Oedipus and his marriage to his mother, Jocasta. On finding about his patricide and incest, Oedipus tears his eyes out and the gods are appeased. The distortions in this great tragedy are few. Oedipus is made the unknowing patricide, *i.e.*, his incestuous and patricidal wishes are attributed to fate and his eyes (testes symbols) are torn out rather than an actual castration occurring. The playwright also, of course, attributes the incestuous thoughts to another and consequently uses the sublimation to reduce his own castration fears. The incest motive of the Oedipus situation is probably the most discussed theme in great literature. It occurs in the literature of all countries. The tragedy is repeated in numerous adoptions and treatments throughout the history of literature. The daughter-father Oedipus situation occurs also in another great Greek tragedy, the *Elektra* of Aeschylus. Shakespeare's *Hamlet* is, as we have already seen, based upon an Oedipus situation. Balzac's *Père Goriot*, as Milton Miller has shown, is based on psychoanalytic mechanisms. Stendhal writes specifically in *Le Rouge et le noir*, that he, as a child, wished to kill his father and marry his mother. Much of the first part of Proust's *Swann's Way* is concerned with his infantile attachment to his mother. Many contemporary theatergoers have seen the theme in Eugene O'Neill's play, *Mourning Becomes Electra.* Such a piling up of examples, however, is not necessary to establish the thesis.

The greatest epic of German literature, Goethe's *Faust*, has its basic theme in the struggle between the constituent parts of the self. Faust early decides, "Zwei Seelen wohnen ach in meiner Brust" and

"In jedem Kleide werd' ich wohl die Pein des engen Erdenlebens fühlen; ich bin zu jung um ohne Lust zu sein, zu alt um nur zu spielen."[1] Thus it is concerned with a struggle between the forces of the id and the restraining powers of the superego. Faust sells his soul to the devil in the hope of really enjoying the fleeting moment, *i.e.*, in the hope of being able to indulge in basic urge behavior without a struggle with his conscience. As everyone knows, he finds that it cannot be done. Goethe himself led a very similar life and the story of Faust and Margaret parallels his own early love affair with Fredrica Brion. Reik (1929) has written a psychoanalytic account of this affair.

Possibly the greatest modern novel is Proust's *Remembrance of Things Past.* It is concerned psychologically with the thesis that past and relatively unconscious experiences determine present reactions. This is very nicely stated in *Swann's Way* in the following lines:

> And so it is with our own past. It is a labour in vain to attempt to recapture it: all the efforts of our intellect must prove futile. The past is hidden somewhere outside the realm, beyond the reach of intellect, in some material object (in the sensation which that material object will give us) which we do not suspect. And as for that object, it depends on chance whether we come upon it or not before we ourselves must die.
>
> Many years had elapsed during which nothing of Combray, save what was comprised in the theatre and the drama of my going to bed there, had any existence for me, when one day in winter, as I came home, my mother, seeing that I was cold, offered me some tea, a thing that I did not ordinarily take. I declined at first, and then, for no particular reason, changed my mind. She sent out for one of those short, plump little cakes called "petites madeleines," which look as though they had been moulded in a fluted scallop of a pilgrim's shell. And soon, mechanically, weary after a dull day with the prospect of a depressing morrow, I raised to my lips a spoonful of the tea in which I had soaked a morsel of the cake. No sooner had the warm liquid, and the crumbs with it, touched my palate than a shudder ran through my whole body, and I stopped, intent upon the extraordinary changes that were taking place. An exquisite pleasure had invaded my senses, but individual, detached, with no suggestion of its origin. And at once the vicissitudes of life had become indifferent to me, its disasters innocuous, its brevity illusory—this new sensation having had on me the effect which love has of filling me with a precious essence; or rather this essence was not in me, it was myself. I had ceased now to

[1] Freely translated: "Two souls dwell in my breast." "In any clothing I shall feel the pain of an earth-bound life; I am too young to be without desire, too old merely to play."

feel mediocre, accidental, mortal. Whence could it have come to me, this all-powerful joy? I was conscious that it was connected with the taste of the tea and cake, but that it infinitely transcended those savours, could not, indeed, be of the same nature as theirs. Whence did it come? What did it signify? How could I seize upon and define it?

I drink a second mouthful, in which I find nothing more than in the first, a third, which gives me rather less than the second. It is time to stop; the potion is losing its magic. It is plain that the object of my quest, the truth, lies not in the cup but in myself. The tea has called up in me, but does not itself understand, and can only repeat indefinitely, with a gradual loss of strength, the same testimony; which I, too, cannot interpret, though I hope at least to be able to call upon the tea for it again and to find it there presently, intact and at my disposal, for my final enlightenment. I put down my cup and examine my own mind. It is for it to discover the truth. But how? What an abyss of uncertainty whenever the mind feels that some part of it has strayed beyond its own borders; when it, the seeker, is at once the dark region through which it must go seeking, where all its equipment will avail it nothing. Seek? More than that: create. It is face to face with something which does not so far exist, to which it alone can give reality and substance, which it alone can bring into the light of day.

And I begin again to ask myself what it could have been, this unremembered state which brought with it no logical proof of its existence, but only the sense that it was a happy one, that it was a real state in whose presence other states of consciousness melted and vanished. I decide to attempt to make it reappear. I retrace my thoughts to the moment at which I drank the first spoonful of tea. I find again that same state, illuminated by no fresh light. I compel my mind to make one further effort, to follow and recapture once again the fleeting sensation. And that nothing may interrupt it in its course, I shut out every obstacle, every extraneous idea, I stop my ears and inhibit all attention to the sounds which come from the next room. And then, feeling that my mind is growing fatigued without having any success to report, I compel it for a change to enjoy that distraction which I have just denied it, to think of other things, to rest and refresh itself before the supreme attempt. And then for the second time I clear an empty space in front of it. I place in position before my mind's eye the still recent taste of the first mouthful, and I feel something start within me, something that leaves its resting place and attempts to rise, something which has been embedded like an anchor at a great depth; I do not know yet what it is, but I can feel it mounting slowly; I can measure the resistance, I can hear the echo of great spaces traversed.

Undoubtedly what is thus palpitating in the depths of my being must be the image, the visual memory which, being linked to that taste, has tried to follow it into my conscious mind. But its struggles are too far off, too much confused; scarcely can I perceive the colourless reflection in which

are blended the uncapturable whirling medley of radiant hues, and I cannot distinguish its form, cannot invite it, as the one possible interpreter, to translate to me the evidence of its contemporary, its inseparable paramour, the taste of cake soaked in tea; cannot ask it to inform me what special circumstance is in question, of what period in my past life.

Will it ultimately reach the clear surface of my consciousness, this memory, this old, dead moment which the magnetism of an identical moment has traveled so far to importune, to disturb, to raise up out of the very depths of my being? I cannot tell. Now that I feel nothing, it has stopped, has perhaps gone down again into its darkness, from which who can say whether it will ever rise? Ten times over I must essay the task, must lean down over the abyss. And each time the natural laziness which deters us from every difficult enterprise, every work of importance, has urged me to leave the thing alone, to drink my tea and to think merely of the worries of today and of my hopes for tomorrow, which let themselves be pondered over without effort or distress of mind.

And suddenly the memory returns. The taste was that of the little crumb of madeleine which on Sunday mornings at Combray (because on those mornings I did not go out before church time), when I went to say good day to her in her bedroom, my aunt Leonie used to give me, dipping it first in her own cup of real or of lime-flower tea. The sight of the little madeleine had recalled nothing to my mind before I tasted it; perhaps because I had so often seen such things in the interval, without tasting them, on the trays in pastry cooks' windows, that their image had dissociated itself from those Combray days to take its place among others more recent; perhaps because of those memories, so long abandoned and put out of mind, nothing now survived, everything was scattered; the forms of things, including that of the little scallop-shell of pastry, so richly sensual under its severe, religious folds, were either obliterated or had been so long dormant as to have lost the power of expansion which would have allowed them to resume their place in my consciousness. But when from a long-distant past nothing subsists, after the people are dead, after the things are broken and scattered, still, alone, more fragile, but with more vitality, more unsubstantial, more persistent, more faithful, the smell and taste of things remain poised a long time, like souls, ready to remind us, waiting and hoping for their moment, amid the ruins of all the rest; and bear unfaltering, in the tiny and almost impalpable drop of their essence, the vast structure of recollection.

And once I had recognized the taste of the crumb of madeleine soaked in her decoction of lime flowers which my aunt used to give me (although I did not yet know and must long postpone the discovery of why this memory made me so happy) immediately the old grey house upon the street, where her room was, rose up like the scenery of a theatre to attach itself to the little pavilion, opening on to the garden, which had been built out behind it for my parents (the isolated panel which until that moment

had been all that I could see); and with the house the town, from morning to night and in all weathers, and the Square where I was sent before luncheon, the streets along which I used to run errands, the country roads we took when it was fine. And just as the Japanese amuse themselves by filling a porcelain bowl with water and steeping in it little crumbs of paper which until then are without character or form, but, the moment they become wet, stretch themselves and bend, take on colour and distinctive shape, become flowers or houses or people, permanent and recognizable, so in that moment all the flowers in our garden and in M. Swann's park, and the water-lilies on the Vivonne and the good folk of the village and their little dwellings and the parish church and the whole of Combray and of its surroundings, taking their proper shapes and growing solid, sprang into being, town and gardens alike from my cup of tea. [From Marcel Proust, *Swann's Way*, Modern Library, Inc., New York, 1928, pp. 54–58.]

The content of much literature can be seen to be concerned with the struggle between the basic urges and their modification through social reality and with conflicts between the constituent parts of the self. This is not to be taken to mean that cultural factors are not important. We have already seen that the superego is heavily culturally determined. Insofar as the superego always plays a role and since great art is moral art, cultural determination is, of course, of the greatest importance both for the understanding of art and for aesthetic criticism. Its discussion however lies beyond the limits of this book.

The form of literature is also determined by psychological factors. Sophistication of form, like distortion of content, allows the sublimation of unconscious conflicts. In poetry, the rhythmic elements like those of music may be a sublimated form of masturbatory and coitus movements. Similarly, the dance may be a sublimated form of intercourse and has its origins in sexual play and preparation for aggression. Havelock Ellis (1923) has devoted one of his best books to this theme. In recent times, the stream of consciousness style of writing approximates the free association of psychoanalysis. Both James Joyce's *Ulysses* and Proust's *Remembrance of Things Past* show this quite clearly. In fact, since both of these works have followed the discoveries of psychoanalysis, they have either been influenced by analysis or represent an artistic parallel of Freud's great scientific discoveries.

Uniqueness of performance is the third characteristic of great art. In the field of literature, the drama alone requires performers and the chief performer is the actor. We have already pointed out that most

actors are phallic characters. Phallic characters were able to identify themselves easily with other people and understand the emotions of other people better than their own. Thus, the requirement of being able to identify oneself with the character, which is the essence of good acting, is explained psychologically.

We have space for only the briefest discussion of the plastic arts. Insofar as painting and sculpture tell stories about people, what we have already said about literature applies to them. The madonna theme and the Venus and Cupid theme are the most frequent in the great classical plastic productions. Landscape and still life offer other problems. "Mother Earth," "Mother Sea," and "Old Man River" give us clues to the psychological factors involved. The love of *fatherland* and the *mother* country are to be sure poetic expressions, but they are images based on very early identifications. The original environment of all of us was the mother's womb.

5. The Audience

The artist projects his internal conflicts into the art product in somewhat distorted form and hence reduces them. The audience introjects the distorted form or identifies himself with the protagonists and resolves in this way similar conflicts of his own. The universality of art is in the universality of conflict. Art appreciation thus makes life more bearable and enriches it.

As swing music was well adapted for illustration of the nature of art production, the movies may be taken to illustrate the effect of art on the audience. The movies are concerned chiefly with heterosexual, but again with premarital and so frustrated, genital conflicts. These conflicts are resolved by marriage or engagement in life and the happy ending is nearly always at the marriage altar. Naturally, of course, the Oedipus situation and hostility play definite roles. The moviegoer identifies himself with the hero and projects his own hostilities on to the villain. This is so obvious that it scarcely needs demonstration. Even such creations of art as the drinking song and the dirty limerick indicate the role of unconscious libidinal and aggressive urges. La Barre has made a special study of this literature from the psychoanalytic standpoint.

The audience for great art is more limited for the same reasons that the productions of great art are more limited. The greater the distortion, sophistication, and uniqueness in the art work, the more rarely may the individual make the required identifications and pro-

jections. As we have already seen, extremely esoteric art is understood by very few and thus loses its social value.

6. The Motivation of Science and Philosophy

It is no accident that Immanuel Kant both postulated the categorical imperative and was one of the most compulsive characters of all times. The central point of Kant's ethics is that morality is governed by an innate conscience which as a part of the practical reason dictates the necessity of behaving ethically. Of course, we know now that the conscience really is made up of the introjected prohibitions and demands of the parents in the form of the superego. We have seen in Chap. XVIII how the compulsion neurotic has a particularly severe conscience or superego and that his neurotic struggle is between this and his unconscious infantile wishes, which come chiefly from the late anal stage. Kant's life was made up of a series of extreme prohibitions and compulsions. He must have had a very strong superego. That Kant's philosophy stems from this neurosis does not in any way distract from the validity of his philosophy for his time and culture. Even psychoanalysts are motivated by unconscious conflicts. Freud himself was the son of an old father and a young mother and must have undergone a fairly severe Oedipus conflict and it may be this which enabled him to formulate his theory in later days. We have already mentioned Newton's schizoid character: Newton also had many compulsive traits. Karl Marx showed signs of definite anal-sadism in his polemical writings. Friedrich Engels was unable to enter into a sex relationship with a woman of his own class and undoubtedly suffered from an unresolved Oedipus conflict. His identification with the proletariat, being as he was the son of a wealthy industrialist, represents his hostility toward his father, his fear of constituted authority, and his unconscious feeling of being the downtrodden one.

Not only are the "facts" which scientists uncover in themselves psychologically determined but also the choice of field in the science. Karl Menninger (1940) will soon publish an interesting paper on the choice of specialties among the medical profession. Helmholtz was an asthmatic who left physics to work in psychology. Darwin, a semiinvalid, spent his life in biology. Surgery is one way in which sadism may be socially sublimated. Psychologists themselves are often people with a large amount of neurotic conflict whose interest in psychology is simply a projection of their interests in themselves.

In art, the content of unconscious conflicts is distorted, through a sophistication of form and in such a way that the repressed wishes may be realized. Science varies in only one respect from art. Sophistication occurs in elegant theories and uniqueness in precise experiments, but the "distortion" represents an adaptation of the wishes to reality. "Reality" itself, however, is determined psychologically and through experience. The scientist expresses his "unconscious conflicts" in a way that is true, *i.e.*, which can be verified experimentally. The artist expresses his in a way which is beautiful. Science consists of propositions about experience to which the universal assent of competent observers may be obtained. Art consists in expressing experience in a way that certain observers realize to be beautiful. But an elegant mathematical deduction has something of beauty about it and a great epic poem something of truth, so even this distinction is a relative one. As soon as the propositions of a science cannot be adapted to reality, the science suffers. But as soon as art becomes esoteric, it suffers too.

In this chapter, we have completed our survey of the ways in which unconscious conflict is resolved. The genius, like the psychotic, the neurotic, the pervert, and the disordered character, differs from the "normal" in that there is a lack of harmonious balance between the constituent parts of the self. This lack of harmony arises largely from the failure to resolve unconscious conflicts. Understanding genius scientifically does not lead us to underestimate the worth or importance of the genius. All life and growth are processes of adjustment of the biological organism to the physical and social environment. Not only do we owe the richness and complexity of modern life to the genius, but without him we should probably all succumb in the struggle. The works of the genius not only make life richer and happier, they make it possible.

Bibliographical Note

Most psychoanalyses of works of art or of geniuses have been printed in the journal *Imago*. Since the outbreak of the present European war, this journal is being edited by H. Sachs of Boston, Mass. This journal is devoted to the application of psychoanalysis to nonmedical fields, and the reader interested in psychoanalytic studies of genius should look into the files. Freud's important studies in this field are to be found in 1924*a*, Vol. IV. Besides Freud's work, that of Rank (1929), Pfister, and Prinzhorn are of general importance. The older psychoanalytic literature on studies of genius is summarized by Dooley (1916). References to particular studies of music, plastic art, literature, and science and philosophy are to be found in Nicole, who furnishes a fairly complete bibliography, and more briefly in Ives Hendrick.

PART V

THE FUTURE OF PSYCHODYNAMIC THEORY

CHAPTER XXII

TOWARD AN EXPERIMENTAL PSYCHOPATHOLOGY

1. The Present Status of Psychodynamics

We have come to the end of our presentation of psychodynamic theory. In this last chapter, we shall evaluate its present contributions and try to foresee its future development.

Our most important single conclusion must be that in recent times psychopathology has become a systematized science. A systematized science is one in which an integrated theory attempts to deduce all the phenomenal data in such a way that its deductions may be experimentally or empirically tested. In this sense, physics is the most thoroughly systematized of sciences and sociology probably the least. Psychopathology is, to be sure, much nearer sociology than it is physics on the scale of systematization. So although we cannot yet speak of a completely systematized science of psychopathology, certainly the framework on which it must be built has been laid down in the last half century. We have seen that the possibility of developing this framework has largely been accomplished through the work of Sigmund Freud and his followers.

Besides becoming systematized in the last half century, psychodynamics has made other methodological advances. These give it a particular significance for contemporary culture. Psychodynamic theory overcomes the necessity for mystical or theological or romantic interpretations of the human personality in any of its manifestations. Before the development of psychopathology, academic psychology attempted to account for the behavior of the "normal" in terms of dynamic principles. But as long as the genius was looked on as "inspired" and the mentally ill as "possessed" and the characterologically defective as "ornery," much of human behavior remained outside the scope of scientific psychology. Modern psychopathology not only allows us to see that the pathological forms of behavior are strictly determined and have a significance and an economy but also allows us to relate these to the common or normal forms. Although it is hard for some individuals with an interest in

the mystic and the romantic to accept this advance toward scientific determinism, the advance can be looked on only as an increase in rationalism. With the scientific understanding of the personality there is no reason that it should become any less valued or that ethical and cultural ideals should suffer. The history of human progress can be measured only in the growth of rationalism. Finally, psychodynamic theory uses a dynamic-genotypical approach rather than a static-phenotypical one. Class theory is being replaced by field theory, and as this occurs psychodynamic theory approaches the methodological adequacy of the older established sciences.

The advances along theoretical lines have enlarged the possibilities for practical application of psychodynamics, particularly in psychotherapy. There is undoubtedly a gradual improvement in the prognosis for treated cases. Of this the modern psychiatrist is quite understandably proud. Not only are we able to understand the abnormal personality theoretically and extend the field of human endeavor in which rationalism holds sway, but for many individuals we are able to make life richer, longer, and happier. In the pragmatic sense, this alone would be justification enough for the study of modern psychopathology. So much for what has been accomplished by modern psychodynamic theory. We may now ask what remains to be accomplished in order that psychodynamic theory fulfill the promise of the present status?

Although we understand the general principles of personality growth and genesis, much about the detailed principles remains to be discovered. For instance, we understand how frustration leads to personality disorder, but our ideas about the specific etiology of the various specific personality disorders are rather vague. A great deal of work remains to be accomplished on the specific etiology of the functional psychoses, the psychoneuroses, the sexual perversions, and the character defects. The problem of the "choice" of mental illness is very important. We do not know, for instance, in advance of the sickness, why one individual becomes perverse and another neurotic, or why one individual becomes psychotic and another develops character disorders. After a complete psychoanalysis, it is often possible to reconstruct the sequence of events leading to the definite sickness. Undoubtedly, constitutional factors play an important role here, and we may expect considerable advance in the problem of precise etiology through the collaboration of internists, psychologists, and psychoanalysts.

In the second place, we need more precise definitions of our theoretical concepts. In our criticism of psychoanalytic theory, we saw that despite the very great genius of Freud and many of his followers, many of the concepts were ambiguous and not at the present time capable of either scientific definition or experimental evaluation. It is to be hoped that the collaboration of psychoanalysts and academically trained psychologists will bring about a sounder methodological background for psychopathology.

In the third place, we need studies to indicate the effect of given amounts of frustration or thwartings on various types of personality. We have seen that, when there is too much frustration for the given personality, mental abnormality ensues. On the other hand, a certain amount of frustration is necessary to develop the civilized individual at all. We must not lose track of the fact that frustration, while leading to mental illness on the one hand, leads to the highest accomplishments of human genius on the other. If we had ways of ascertaining just how much thwarting would lead to the development of highly diversified but still well-integrated personalities, we could improve the average individual psychologically within a very few generations in much the same way modern organic medicine and physical hygiene has improved him physically. This is a particularly important need if psychopathology properly applied is to help us overcome the present cultural crisis. In his very considered essay, *Civilization and Its Discontents*, Freud discusses this cultural crisis in a rather pessimistic tone, but not all psychoanalysts foresee the future so darkly.

In the fourth place, we have so far done very little along the lines of prevention of mental disorders. Because of the economic costs of psychotherapy, it is easy to see that psychotherapy is not applicable to the vast majority of humans, at least under the present economic setup. The mental hygiene movement has undoubtedly established some good beginnings in this direction. The mere knowledge of the mechanisms underlying human behavior in itself undoubtedly does a great deal toward the preventing of all mental disorder. On the other hand, the subject matter is not easy and the outlooks for public education along mental hygiene lines are not so bright as they might be. Furthermore, although the theoretical potentialities of a manipulation of barriers in the psychological field seem unlimited, for practical purposes many barriers are definitely established. This is quite obviously so of the barriers which arise in connec-

tion with economic goals. Furthermore, there is a real antithesis between some religious goals and those of the psychotherapist. This leads to clashes between the ideals of the mental hygienist and the ideals of the church. Although some individuals believe that we are moving to a society in which the scientific world outlook will completely replace the religious world outlook, others are much more pessimistic about this advance. There is indeed much in psychodynamic theory which would indicate that adoption of a completely scientific picture of the world is neither possible nor desirable. This problem has also been discussed by Freud in *The Future of an Illusion* (1928). Freud looks forward to the gradual falling away of religion as an important social institution. But other analysts like Ives Hendrick consider this one example of wishful thinking on Freud's part.

This leads us to a fifth problem which remains to be solved before modern systematized psychopathology may really fulfill its promises. This problem lies in the relationship of socioeconomic theory to psychological theory. The problems of reconstructing the individual are intimately related to those of reconstructing society. This should be quite obvious from what we have already discussed concerning the relationship between medical psychology and medical sociology. Some psychologists believe that the deep-seated biological urges of an aggressive sort makes a complete reorganization of society impossible. Freud (1933*b*) and his more orthodox followers take this viewpoint. Others like Kardiner, Frankwood Williams, Karen Horney (1939), and Faris and Dunham believe that so much in the psychology of the individual is sociologically determined that little psychological improvement in the individual is possible without rather drastic changes in the social order. At all events, the problem of just how much in the behavior of the individual is sociologically determined and just how much psychologically, remains at the present time unsettled. The tendency at the present time is for the individuals who have previously insisted on psychological determination to admit many sociological facts, and vice versa. We have good reasons for believing that the basic science of human relationships of the future will be a socio-psycho-biology. Space does not permit us to deal with the important problems of the relationships between sociology and psychology in this book. We must, however, point out that it is highly likely that, for the really successful application of the new psychological principles, the development of a science

of medical sociology will be necessary. At the present time the application of medical psychology is being held up through lack of a knowledge of sociological laws very much in the same way that, a very few years ago, the application of internal medicine suffered from a lack of the knowledge of psychological laws. We cannot consider in this text the social psychological aspects of the application of modern psychopathology, nor can we discuss the relationships between psychology and economics.[1] The rest of this chapter will be concerned with how we may best further our knowledge in the field of psychology and psychopathology.

We may ask, how may the shortcomings of contemporary psychopathology be overcome? We may hope for continued and more detailed case studies by the psychoanalytical method. The central nucleus of what we know about psychopathology comes primarily from the psychoanalytical investigations of Freud and his followers. The case studies of the future, however, may well be undertaken simultaneously with characterological investigations, experimental psychopathological investigations, and pharmacological investigations. The detailed psychoanalytical case studies alone cannot hope to show us a great deal more than we have already learned from them. The range of case studies should also be considerably enlarged, and we need detailed psychoanalytical studies on many categories of behavior disorder where at the present time we have only a few. Studies in the field of organic diseases, in the field of senility, in the field of character disorders, should thus prove very valuable.[2] Alexander has pointed out the necessity for psychoanalysis to become less secular in his paper "Psychoanalysis Comes of Age."

We must hope in the second place for increased knowledge through the more precise development of techniques for investigating constitution and character. The characterological studies and techniques of investigation, it is hoped, will cast considerable light on the choice between psychosis, neurosis, perversion, and character disorder. It is the author's belief that the characterologists, like the analysts, cannot much longer work profitably without the suggestive

[1] The author has already discussed the sociopsychological aspects in his *Psychology and the Social Order*.

[2] At the Chicago Institute for Psychoanalysis, the Presbyterian Hospital in New York City, and the Menninger Clinic in Topeka, such studies are being undertaken. *Cf.* Alexander (1936), Dunbar (1935), and Menninger (1938).

controls of each other. It is hoped particularly that more definite studies of body build like those of Kretschmer and personality types like those of Jung and others will be coordinated with psychoanalytical studies.

In the third place, considerable knowledge of the psychopathology of humans may undoubtedly be gained by the study of comparative psychopathology. We shall see that there are definite limitations to the implications of the psychology of the infraprimates for human psychology. Most notable of these are the limitations from the lack of social organization similar to that of the humans among the infraprimates. Since it is now admitted that so much of the mental disorders of humans are socially conditioned, and since rats, for instance, have neither society nor superego in the human sense of the word, these limitations will be apparent. On the other hand, it is quite possible to develop artificial situations in which animals will meet frustrations of a definite sort and in which the "animal equivalent" of behavior disorders undoubtedly develops. We shall return to this problem shortly.

The most hopeful mode of attack on the problems lies in the development of an experimental psychopathology. By experimental psychopathology is meant actual experiments in definitely and carefully controlled situations in which both abnormal subjects and normal controls take part. Work on experimental psychopathology has developed very rapidly during the last decade. Development of experimental psychopathology was suggested by both Wundt and Kraepelin in the closing decades of the nineteenth century. Both psychiatrists and psychologists have done experiments in this field but only recently has there been the necessary cooperation between them. The earlier experiments were quite sterile compared with the fruitful discoveries made by the clinical method and the earlier clinical methods lacked precise experimental criticism. Today we have the definite beginnings of a science of experimental psychopathology in that several university laboratories and hospitals are devoting themselves to such studies. In the rest of this chapter, we shall outline the chief fields in which such work has been undertaken.

2. Prerequisites to an Experimental Psychopathology

Experimental psychopathology should proceed along the lines of investigation which have been proved most successful in the older, better established sciences. In other words, it should utilize so far

as possible a hypothetico-deductive method. The hypothetico-deductive method is of course basic to a field-theoretical attack, and so the theory should be based on field theory. This is particularly necessary because the theory of modern psychiatry tends more and more to be concerned with underlying dynamic and genotypic processes. Since we have already seen that psychoanalytic theory both utilizes the hypothetico-deductive method and is a field theory, a very good starting point would be the experimental investigation of psychoanalytic concepts. In this chapter, we shall point out that this is possible in several experimental fields, most notably that of topological psychology. The earlier experimental work, for instance, that which came from the collaboration of Wundt and Kraepelin, was largely concerned with the exact measurement and description of symptoms. It is certainly true that the measurement of symptoms by the exact methods of the psychological laboratory is important and in actual psychiatric practice is not done nearly so much as it should be. Despite the widespread use of intelligence tests, memory tests, and devices for investigating the associations, it is only at the exceptional mental hospital that the patient is investigated by a trained laboratory psychologist. But while the experimental investigation of symptoms is important and the lack of its proper development is to be deplored, the development of experimental procedures which will investigate underlying dynamic processes may be much more fruitful. As we go on in this chapter, we shall see something of the work which has been accomplished along these lines. Here, let it be said that most of the work reported falls far short of being field-theoretical in its scientific stringency. While descriptive classification must always precede systematic explanation and while the exact and meticulous description of the symptomatic surface behaviors is necessary, the time seems ripe for attempting to introduce experimental methods for measuring and describing the dynamic structure of personality.

Field theory demands that the theoretical constructs be brought to the test of critical experiment. One of the chief reasons why experimental psychopathology has been so slow to develop adequate methods is that, in the interests of precision, psychologists have investigated only the very superficial aspects of emotional processes. We have many experimental techniques which may be utilized in recording the bodily changes associated with emotion, but on the whole these have been applied only in very artificial situations.

Thus the results have been precise but sterile. As important as adequate theories are, their use in adequate experimental situations is even more important. The situations chosen must be close enough to real life situations that actual or real emotions rather than simulated or play emotions are brought into being. This does not mean that the intensity of the emotional situation in the laboratory has to equal the intensity of real life situations, as Lewin (1935) and Dembo have shown that it is quite easy to create emotional situations in the laboratory. The importance of utilizing real life situations can readily be demonstrated by reference to some of the existing literature. Thus, in early studies of hypnosis, it was found that hypnotized subjects behaved quite differently with play objects than they did with real objects. Most of the laboratory studies of emotion have been inadequate because the subjects knew they were expected to develop emotional behavior. A similar shortcoming is found in the attempted introspective studies of emotional status. When the individual is behaving rationally enough to introspect on his emotions, there is usually little emotion to introspect on. Various devices are now available for raising real emotional responses within the laboratory situation. This is usually done by frustrating the individual with regard to some goal so that emotion develops without his knowing that the experiment is primarily concerned with emotion. The pioneer work with this type of situation was done by Lewin and his students.

The results gained through experimentation must be interpreted with regard to the *transference situation.* Actually, this is important with every experiment on human subjects in which the experimenter comes in face-to-face contact with the experimental subject and in this way applies to all or to practically all psychological work on humans. It is particularly important in working on psychopathological subjects, however, because the patient always comes to the experimenter as to a new physician. The experimenter has considerable positive or negative transference value for the subject and so from the beginning a specific factor enters into the patient's psychological field. This factor of transference undoubtedly makes it more difficult to evaluate the results of the experiment but by no means does it invalidate the possibility of an experimental psychopathology. Failure to take the transference situation into consideration, however, often makes the interpretation of results quite invalid.

In addition to considering the transference, the immediate past history of the subject's disease must be taken into consideration and the acuteness or chronicity of the disease picture carefully noted. Undoubtedly one of the chief reasons why so few experiments on abnormal patients have turned out successfully is that there is a tendency on the part of the experimental psychologist to group all the members diagnosed in any particular category together. Anyone with the slightest clinical psychiatric experience should realize the dangers in so doing. If one simply takes the one disease schizophrenia and compares the preschizoid personality with the acute manifestations of the disease, with the chronic manifestations of the disease, and with the recovery period, one sees a tremendous variation in symptoms and behavior traits. Lumping these groups together and averaging the results of experiments on them will never give a true picture of any underlying dynamic process. Similarly, if one compares the manic and depressive phases of the manic-depressive psychosis without separating them in the tabulation of results, many of the individual behavior traits and symptom descriptions will undoubtedly appear quite normal. Thus, one can say that one of the chief defects of the class-theoretical approach to the problems of experimental psychopathology is that of neglecting the precise momentary structure of the personality. Further, complications arise from the fact that most experiments done on psychiatric patients are done in an institution. One must remember that we are dealing with individuals in a particular environment. This means that the field of free action of these individuals is much more limited than the so-called normal groups outside institutions. It is necessary often to consider the individual's reaction with regard to the institution.[1] Furthermore, the individual is leading a life of very ordered routine and the requirement of taking part in special tests may be much more traumatic an experience than such a procedure would be in the normal subject. Whether the individual comes to the experimental situation voluntarily or involuntarily is of importance. Many patients look on taking part in a psychological experiment as a possible examination concerning their present mental status which may be used for them or against them. This also complicates the picture. All these complications necessitate the development of special controls. When these complicating factors

[1] *Cf.* the interesting paper of Dembo and Hanfmann, "The Patient's Psychological Situation on Entering a Mental Hospital."

are controlled, however, there is no reason why the institutionalized patient should not be experimented upon. Since we realize that the institutionalized patient shows particular disbalance of human personality structure, we have good reason for believing that the time spent in undertaking such special controls will be eminently worth while. In summary, then, experimental psychopathology should take account of all the factors we have just mentioned. It should be based on the hypothetico-deductive method and utilize field-theoretical conceptions. The critical experimental situations utilized should be real life situations and concerned with integrated total behaviors. The transference situation should be taken into consideration and the complications which come from the patients' institutionalization must be kept in mind.

In the following sections of this chapter, we shall present very briefly the experimental methods which hold promise for the development of experimental psychopathology. The experimental techniques are often so complicated and the factual results so extended that adequate presentation of either is impossible in the limits set for this book. Our survey will hence consist in a methodological introduction to the field rather than either a manual of laboratory instructions or an abstract summary of the results already obtained. Each mode of attack will be valued with regard to its possible contribution to psychodynamic theory and references to more detailed technical and factual accounts will be given. Only techniques which are psychological in nature can be presented. This means that a fairly large literature based on physiological and pharmacological research will have to be omitted. The only purpose of the following sections is to give the students of both psychology and psychiatry a survey of the possible modes of attack and so possibly stimulate them to further investigations in this important field.

Throughout our discussion of the various methods, references to specific studies will be given. Some of the publications, however, cover the general field of experimental psychology and we must refer to them first. There are several books which deal with experimental psychopathology and which give abstracts of the detailed literature. Gregor's *Experimentelle Psychopathologie,* published in 1910, is the first on the topic and gives an excellent résumé of all the work done in German laboratories and clinics up to that date. The reader will remember that this work was largely concerned with the measure-

ment and precise description of symptoms. Hamilton's *Objective Psychiatry* is a later work which attempts to reduce psychiatry to objective and experimental methods. This book has been very influential in stimulating recent experiments in this country. D. E. Cameron's *Experimental and Objective Psychiatry* develops some of the psychological as well as physiological and pharmacological work. The work on schizophrenia is summarized in N. D. C. Lewis's book on the subject. J. McV. Hunt (1936) has summarized all the experiments reported in English on disordered patients through 1936 in an excellent abstract. Murray's *Explorations in Personality* is very important in that the most varying techniques are used to experiment on personality and the results are reported. The work of Dollard and his colleagues (1939) combines theoretical and experimental approaches to the general problem of *Frustration and Aggression*. Bentley's essay "General and Experimental Psychology" in Bentley and Cowdry gives a carefully selected account of researches which he thinks will be useful in this field. The role of the psychologist in psychiatric research has been the subject of essays by Cameron (1937), Lewin (1937), and the author (1937*b*).

3. The Recording of Bodily Changes in Emotion

The organismic solution of the psychosomatic problems makes the investigation of bodily changes in emotional behavior very important. The origin of many physical diseases is realized today to lie first in functional and then, later, sometimes in structural changes in underlying physiology brought about by prolonged emotional states. Since all behavior originates in the emotions, the bodily concomitants of emotional behavior are important even in the primarily psychogenic disorders. The thalamus and the autonomic nervous system are always involved in emotional behavior. There is always visceral and glandular response. Registration of this reponse by various psychological techniques gives us methods of objectifying and so measuring emotional states. It also gives us methods of relating somatic change to psychic change and studying these interrelationships. There is a vast accumulated literature on this problem. This has been recently summarized by Dunbar (1935). Menninger (1938) and Alexander (1936) furnish less complete but very readable summaries. Some of the chief findings and problems are touched on in the following lines.

Blood Pressure.—Since the invention of the sphygmanometer[1] and the possibility of registering systolic, diastolic, and pulse pressure, there has been the growing realization that these figures fluctuate widely and fluctuate with emotion. No good physician is satisfied with a single determination of blood pressure these days and the so-called "norms" are known to fluctuate widely. There are many studies in the field which indicate blood pressure rises in emotion, particularly in fear and rage. Alexander and his colleagues in the most recent studies of blood-pressure reading during the course of psychoanalysis have shown the intimate correlation between height of the readings in millimeters of mercury and frustration and unconscious hostility. Studies by Menninger (1938*a*) report similar findings. For this reason, we may believe that so-called "essential hypertension" has a large psychogenic component.

Although there is some fluctuation in the manometric readings for all subjects, some subjects not only have higher average readings but also fluctuate more greatly in their readings than others. The exact nature of this is not yet determined and is under investigation.

One of the chief technical problems requiring solution is the continuous registration of blood pressure. At the present time, except in techniques such as those of Darrow and Keeler, it is possible only to check the blood pressure immediately before or after some emotional experience. The devices for continuous readings are themselves cumbersome and require that the subject remain at rest or in a quiet position. The invention of some sort of sphygmanometer which would allow continuous recordings of relative systolic pressure over periods of comparatively free activity on the subject's part is highly to be desired.

Respiration.—Through the pneumograph it is possible to measure the most important facts about respiration. The breathing curve gives us amounts breathed, frequency of respiration, course of respiration, and the relationship of the expiration-inspiration index to the basal metabolic rate. Like blood pressure, it has long been known that respiration varies with emotion. Respiration has been particularly important in connection with a problem of psychosomatic medicine, namely, asthma. That there is a strong psychogenic factor in asthma has been well known for some time.

[1] It is assumed that the student is familiar with the nature of these registration techniques from other courses. Those who are not will find them in most standard works on experimental psychology or physiology.

Alexander, French (1939), and the staff of the Chicago Institute for Psychoanalysis have been investigating this problem. Alexander has also made some characterological speculations concerning breathing curves. The technical problem of recording continuous breathing curves while the subject has some freedom is another one which should be worked out.

The Psychogalvanic Reflex.—Since its discovery by Féré and Tarchanoff in 1888, the psychogalvanic reflex has interested psychologists as an indicator of emotion and as a possible lie detector. There is a vast literature on it. The deflections of the galvanometer with changes in skin resistance during emotion have been investigated with somewhat varying results. The instrument, on the whole, is "too sensitive" rather than not sensitive enough and extraneous physiological conditions probably upset some of the readings. The psychogalvanic reflex has been used along with reaction time and other physiological indexes in investigation of associations, both free and controlled. A good résumé of this work is to be found in Dunbar. The psychological literature is also summarized by Landis and Landis and DeWick (1932).

The Luria Technique.—Perhaps of the greatest possible psychological significance in techniques of this general nature is that recently developed by the Russian psychologist, A. R. Luria. Luria's investigation of the disruption of behavior in emotion stands out because it is based on an attempt to investigate psychodynamic theory experimentally. The theory is closely related to psychoanalytic theory and leads Luria to demonstrate the presence of the unconscious or semiconscious conflicts by disruption of simultaneously performed voluntary motor activity. In his technique, the involuntary movements of the left hand are recorded when voluntary movements of the right hand are inhibited. The subject is requested to press a key with the right hand on giving his association to a stimulus word. If for either conscious or unconscious motives the first association is repressed, this repression or inhibition is indicated in an involuntary movement of the left hand. Use is also made of reaction time, form of the right-hand response, and right-hand response tremors. The Luria device combined with blood-pressure readings, pneumographic records, and the psychogalvanic reflex make probably the best indicator of emotional states we have today. Luria was able to show that stimulus words which arouse unconscious or conscious conflicts always could be ascertained from the record of

the two hands with certain secondary records such as respiration. He thus confirms experimentally the effect of conflict on motor response and some of the basic formulations of Freudian theory. Luria's basic findings have been repeated by Barnacle, Ebaugh, and Leinere and by Huston, Shakow, Erickson, Trovillo, and Shuey. The last two investigators were particularly concerned with pointing out the possible use of Luria records in determining personality types and in psychiatric diagnosis. Certainly experimental psychopathology could make much use of the Luria technique. Like the other techniques, however, it is impossible to get continuous recordings without greatly limiting the freedom of the subject.

From blood-pressure records, respiration records, and the two hand records from the Luria technique, it is possible to get reactions at various levels of consciousness and various degrees of volition in investigating the response to certain stimuli. The relative systolic blood pressure gives us an unconscious involuntary response, the respiratory record gives us an unconscious but voluntary response, the Luria left-hand record gives us a conscious involuntary reponse, and the Luria right-hand a conscious voluntary response. Such a technique is useful in detecting unconscious emotional conflicts in the possible validation of Rorschach records and in the experimental criticism of Freudian concepts. Experiments along this line have been started at the Menninger Clinic and the State Hospital at Osawatomie, Kansas. Preliminary reports have been made by Varvel and Brown and Orbison.

4. The Standard Tests

Intelligence Tests.—Intelligence tests may be used in development of experimental psychopathology. In connection with our discussion of hypophrenia, we have already touched on the problem of the I.Q. and intelligence testing. There we saw that this was such a large field of psychology as to preclude any detailed discussion of it in this book. The I Q. test, however, has a certain role in experimental psychopathology and is a valuable device to get insight into the patient's adaptation to problems in the immediate environment. Recently it has become obvious to psychologists that the I.Q. fluctuates widely and the test reading of a psychotic patient must not be taken to mean that his intelligence was always or is permanently so depressed. The new Bellevue Adult Intelligence Scale which was developed by D. Wechsler (1939) is well adapted to work

with clinical patients. Wechsler is working on the problem of deterioration. A special mental test for deterioration has been standardized by Babcock. Discussions on intelligence testing and its use in psychiatry will be found in D. E. Cameron, Pintner, and Garrett and Schneck. A complete up-to-date bibliography of tests is that of Hildreth; Buros's *Yearbook* summarizes the older work and gives the new work in the field of testing.

Character and Social Attitude Tests.—There is also a large number of tests for various personality types and social attitudes. This literature has been reviewed in Symonds. Buros's *Yearbook* brings the list up to date. Most of these tests require the answering of questionnaires printed on paper by use of a pencil and they are consequently called "paper-and-pencil tests." Although some of them may have some significance in experimental psychopathology, most of them are rather useless. In many of the older ones the purpose of the test was frankly stated and this led to weighting of the answers so that a great deal of unreliability was introduced. For instance, nearly everyone has heard something about introversion and extraversion and has his own idea of whether he is an introvert or extravert. He thus will answer the questions in line with his preconceptions. Recently most tests have overcome this source of error by disguising the purpose of the test. It is doubtful, however, if these paper-and-pencil tests give us any information which cannot be gotten in a careful clinical examination and such an examination will bring out facts about personality structure which the tests do not. They are useful for surveys of a total population when individual clinical examinations are impossible. Among the better known of these paper-and-pencil tests which have some psychiatric significance are the Neymann-Kohlstedt test for introversion-extraversion, the Bernreuter personality tests, the Thurstone Personality Inventory, and the Terman-Miles Masculinity-Femininity Test.

Social Intelligence Tests.—It is well known that an individual's I.Q. may be exceptionally high, but that he may be socially maladjusted. This has led to the creation of tests based on the general pattern of the intelligence test, where social rather than intellectual maturity forms the standard for comparison. These tests have about the same applicability in experimental psychopathology as the intelligence tests. Outstanding examples are the Vineland Social Maturity Scale, the Haggerty-Olson-Wickman Behavior Rating Scale, and Bleuler Maturation Test.

Free and Controlled Association Tests.—The method of free and unhampered association is, as we have seen, basic to psychoanalysis. Some insight into the patient's associative processes can be gained in less time by use of the various association tests. These may be used alone or in connection with recording of the physiological concomitants of emotional behavior. Free association tests allow the subject to give all his verbal associations to one stimulus word such as "mother" or "love" or "whisky." Controlled association tests allow one response to each stimulus word. These association tests are undoubtedly useful in uncovering conscious and semiconscious conflicts, particularly when they are associated with physiological recordings. The method was introduced by Jung (1919) and has been standardized by Kent and Rosanoff for the American public. The interested reader will find instructions for giving the tests with frequency tables and suggestions toward evaluating results in Rosanoff's *Manual of Psychiatry*. The free and controlled association tests like the paper-and-pencil tests seldom give any information not available from detailed clinical study, but they represent a possible timesaving device.

The Rorschach Test.—Related to the association tests is the special procedure of the Swiss psychiatrist Rorschach. Rorschach constructed a series of ten ink blots which are ambiguous as to meaning but which suggest certain pictures to the average individual. The test is administered by allowing the patient to observe the cards in order and having him report everything he sees in them or that he is reminded of. The test is a semicontrolled association test, where the stimulus material has no objective meaning. Of all the tests so far reported, only the Rorschach will sometimes give information about the personality structure which cannot be elicited by clinical interviews. Some of the ink blots are colored; they vary greatly in form and shading and complexity. A method is thus given for testing perceptual and cognitional integrations and comparing these with the emotional background. A highly complex method of scoring has been worked out. Separately scored are: the part of the card the subject looks at, what he sees on the card, and how he sees it. The result is given in a psychogram which is a configuration in which the important values are the interrelations between the variables. The Rorschach test is becoming a very specialized field of personality study and the administration of the test requires special training. The test undoubtedly needs objectification and some

further standardization. Of all the tests we have discussed, however, this is undoubtedly the one which properly administered gives us the best information in the relatively shortest time. The most inclusive works in English on the Rorschach test are those of Beck (1937, 1938). Hertz (1935*a*) and Rickers-Ovsiankina have also published scoring schemes. The literature on the test is very voluminous and has been summarized through 1935 by Hertz (1935*b*). The Rorschach test is useful clinically in diagnosis and prognosis. It is possible that its application will have nosological significance. In the experimental field, it can well be used to evaluate various therapies.

With the possible exception of the Rorschach test, no one of the standard tests is in itself an experimental device. They are rather measuring instruments of varying validity and reliability, which give us a more or less objective picture of personality. They may have their definite uses in experimental psychopathology but comparative psychopathology and the topological approach offer more promise.

5. Comparative Psychopathology

Much of modern medicine is based on the comparative method. Comparative anatomy and comparative physiology are two of the cornerstones on which modern physiology and pathology are built. In the field of normal psychology, our knowledge of learning and perception has been definitely furthered by the comparative approach. Certain psychologists like Tolman and Yerkes have argued quite persuasively for the use of animals for experimental purposes in psychology. Their argument is based on a series of facts which are indeed impressive. (1) Since the Darwinian theory has demonstrated the continuity of all life, animals represent organisms much less complex than humans and consequently easier to study. Modern physics is based on the simplest laws of motion; perhaps behavior theory can be based on the simplest laws of behavior. (2) The animal may lead a comparatively standardized life except in the experimental situation. Thus extraneous environmental factors are completely controlled. (3) Experimental animals may —unless the stupid behavior of antivivisectionists prevents it—be subjected to changes in environment and to psychological and medical treatments which are not permitted with human subjects. (4) Surgical techniques which may even lead to the death of animals allow more intimate study of the psychosomatic relationship than is possible with humans. (5) Control of breeding and reproduction

and rapidity of reproduction permit a more accurate study of the hereditary and constitutional factors involved. These are very telling points and it is only natural that psychopathologists have been recently somewhat concerned with the problem of comparative psychopathology and particularly experimental neurosis in animals.

There are, however, severe limitations in the comparative approach which must also be mentioned. (1) The mere simplicity of behavior is itself a limitation. Psychopathology is concerned with disorders of complex functions like reasoning and belief and, although animals show the nuclear forms of both, these probably differ in animals. It is hard to imagine paranoid delusions in the laboratory rat or dog. (2) The lack of language in animals is an even more severe limitation. A guinea pig has no "free associations." (3) The animals with the exception of a few species show only rudimentary social organization. Functional mental disorder is largely socially conditioned. (4) Most important psychological conflicts are concerned with the frustration of instinctual urges by "civilization." Although the physical forces of nature frustrate animals and perhaps some species have the beginnings of civilization, such beginnings are scarcely comparable to human frustrations in human culture. (5) Following on this, animals have probably little ego and practically no superego. Whereas these disadvantages make us less enthusiastic about the potentialities of a comparative psychopathology, they by no means make experiments on animal subjects useless.

Observation of the social life and sexual life of the higher apes has shown the beginnings of social and sexual mores and the undoubted frustration of certain of these by other members of the community. Koehler (1929*b*) points this out quite clearly at the end of his monumental experiments on chimpanzees and Zuckerman gives many examples of it. In a single observation, Tinklepaugh has reported a case of self-mutilation in a *Macaca rhesus* monkey who was separated from his mate and forced to live in an adjoining cage to the mate and another male. The behavior reported was definitely "psychotic" with a complete change in the character of the animal. Pavlov reports the disruption of habitual responses in all his experimental animals following extreme fright situations. The author had a dachshund which from puppyhood grew up in a city apartment and was only taken out muzzled and leashed and had only sporadic contacts with dogs. This animal became undoubtedly a severe

"neurotic" with libidinal fixations to humans much stronger than those to other dogs. Various observations by veterinaries and others report unquestionable evidence that "psychoses" and "neuroses" in animals do exist, particularly in domesticated animals. H. Dexler has given us the most thorough summary of the observations of Continental authors. Briefer summaries are to be found in the texts of Hempelmann and Maier and Schneirla.

Of probably greater importance are the attempts to study the development of abnormal behavior experimentally in animals in the so-called "experimental neuroses." Pavlov first noted that an animal which was being differentially conditioned to a stimulus developed "neuroses" when the differentiation was no longer possible to the animal. This was indicated not only by gross behavioral changes but by disruption of previously learned habitual responses. Thus, in a conflict situation which is strongly motivated (the animals are hungry), neurosis develops when no solution to the problem is possible. This is so similar to our ideas of frustration and the development of neurotic symptoms in humans as to be highly suggestive. That such experimental neuroses occur in other forms has been demonstrated by Liddell for pigs, by Gannt for other dogs, and by Cook and by Maier, for the laboratory rat. Maier's work is particularly important because he investigates not only the disruption of behavior but also the reintegration of behavior.

Recently from the Yale laboratories have come experiments in which the presence of mechanisms very similar to those uncovered by psychoanalysis is shown in the rat. A good popular report of this work is given in the article by Miller and his associates in the *Yale Scientific Magazine.* Thus, N. Miller (1940) has investigated "emotional displacement" and Mowrer (1940) "regression" and "reaction formation" in rats. Such studies may be very important for two reasons. They allow the mechanisms to function under strict control and allow the investigation of the role of the nervous system in them.

Future research along these lines may throw considerable light on constitutional and hereditary factors, the amount of frustration possible under certain conditions, and the role of various therapies. Of extreme interest would be experiments on domesticated animals because of the social factors involved. Every dog lover knows that dogs show social emotions to a great extent. "Depressions" sometimes ending in death through grief are very frequent in dogs on

being deserted by their masters. Anxiety and fear and jealousy also occur. The puppy goes through a series of frustrations very similar to those of the baby. He becomes weaned and thereafter fed at only certain times, he also becomes housebroken, his sexual life is regulated. Consequently, the rudimentary forms of oral, anal, and genital frustration are present in the process of domestication. Experiments with dogs or domesticated monkeys may well do a great deal in clarifying psychodynamic theory in the future. To date, despite the interest in the comparative approach, our knowledge of human neurosis does more to elucidate the nature of animal neurosis than the knowledge of animal neurosis shows us about humans.

6. The Topological Approach

Of all the various approaches to experimental psychapothology, the author believes that the topological approach promises most. This viewpoint was presented in a recent paper (1937*b*). The following lines, taken from this paper, give the chief points of agreement and disagreement between topological psychology and psychoanalytic psychiatry. They also may be taken as a useful summary of the contemporary relationships between experimental psychology and psychopathology and psychiatry.

Topological psychology has developed independently or taken over from psychoanalysis certain basic methodological postulates which give the two systems much in common. A listing of these should make clear the possibility of cooperative research.

1. Critical philosophy is able to reduce all the various schools and *isms* of modern biological thought to two basic philosophies of biology. These may be called *organismic* and the *atomistic-mechanistic*. The organismic philosophy of biology stresses the wholeness of the organism and the priority of wholes over parts. Organismic thinking looks on the individual as a self-regulating energy system. It should be obvious that psychoanalysis adheres to this philosophy of biology, which is also basic to topological psychology. Opposed to this is atomistic-mechanism which stresses the priority of parts and looks on the organism as a machine. Atomistic-mechanism is, of course, basic to behaviorism.

2. The psychoanalyst has long stressed the fact that there is the most intimate connection between psychological mechanisms and the social anthropological culture in which the individual finds himself. Indeed the implications of the Freudian theory for anthropology are second only to those for medicine. The application of topological principles to social psychology also stresses this point. The social anthropological, eco-

nomical, and political characteristics of the environment must all be characterized in determining the structure of the social field. Behaviorism, on the other hand, has been inclined to study the organism in isolation from its culture.

3. There is a close general agreement between the two theories with regard to the structure of the personality and to the nature of personality genesis. The multiple-structured self of the psychoanalyst, with its division into conscious, unconscious, foreconscious, and ego, superego, and id is closely paralleled by the regions in the person structure as described by Lewin. Furthermore both schools agree that this differentiation comes out of more unitary primitive wholes, the id of the analyst and the undifferentiated child person of the topologist. Both schools see this differentiation as arising in the process of growth, where the organism in an environment of varying structure meets barriers to basic instincts or vectors.

4. Methodological studies have indicated that the most fruitful method of scientific advancement is the hypotheticodeductive or constructive method. This method allows the use of theoretical constructs like the libido, the ego, and the unconscious of the Freudians, and the vector, person, and reality dimension of life space of the topologist. Behavior alone is observed, but this behavior is coordinated with theory in order to integrate the various facts and to point to implications for further research. The whole growth of psychoanalysis is one in which facts were integrated into theories, which in turn were adapted to new facts. A similar process of growth has occurred in topological psychology. The purely inductive method which attempts a statistical accumulation of facts without theoretical coordination has been recently abandoned even by some of the behaviorists.

5. Both psychoanalysis and topological psychology believe in psychic determinism and in the uniformity and continuity in psychological nature. Basic laws are sought which must account for both normal and abnormal behavior. All psychic phenomena, including symptoms, have a cause, a meaning or significance, and an economical function with regard to the psychobiology of the whole organism.

Despite such close agreement on such basic postulates, there are *differences* between the two schools. These differences are luckily of a nature, however, that they might be decided either clinically or experimentally. They may again be listed:

1. It is the nature of the theoretical constructions of the two types of psychology wherein the chief difference lies. The constructs of psychoanalysis have arisen in a rather haphazard manner in the course of the clinical practice of a few medical men of unquestioned genius. The psychoanalytic method has been so very fruitful in uncovering the most important and sometimes amazing correlations in the psychodynamics of the individual that the clinicians have had little opportunity to criticize

these concepts methodologically. The topologists, on the other hand, have attempted the most stringent, where possible even mathematical, definition of their concepts. Every behavioral event is to be ordered to theory, which is so constructed that experimental verification is possible. Where the concepts of psychoanalysis are seldom precisely enough defined to allow the critical experiment, those of topological psychology always are. If I seem here unduly to favor topological psychology, let me say I do so only from the standpoint of method. There are many problems raised by psychoanalysis, perhaps most notably that of symbolism, where the topological attack falls down completely. But those problems which topological psychology may attack are to be given a definite answer.

2. Present behavior in topological psychology is always derived from the existing structure of the psychological field. In this, topological psychology may be said to be an ahistorical science. Ahistorical sciences like physics do not need to know the past history of events studied, because they are able to give a complete dynamic description of the momentary situation. It is freely to be admitted that few problems exist where at the present time we do not need to know something of the history. Psychoanalysis is a historical science, *i.e.*, it is concerned with the effect of past emotional experience on present behavior. Topological psychology does not deny that historical sequences have great present importance. It attempts, however, to derive present behavior from the precise momentary situation. How far such deduction may be carried out, time alone will tell. All systematic sciences tend to be ahistorical.

3. I believe that there is to be found a slight difference in emphasis on the efficacy of the various factors of what both recognize to be a socio-psycho-biological problem. The psychoanalyst is forced from his instinct theory of the basic urges to stress the psychobiological aspect of the problem. As an example of this let us consider the frequent argument of the psychoanalyst that war is inevitable and that socialism is impossible, because of the aggressive urges or the Freudian death instinct. The motivating forces according to psychoanalysts are innate instincts or urges. The motivating forces according to the topological psychologist are functions of the organism *in* the environment. Although psychoanalysts consider the environment, they attempt to deduce behavior almost solely from the person. To put this difference in emphasis rather bluntly, the psychoanalysts assume considerably more immutability of human nature than do the topological psychologists. Both agree that biological mechanisms are subject to environmental manipulation. The topologists, however, would consider the potentialities of manipulation greater than do the psychoanalysts.

4. Finally, the data of psychoanalysis come chiefly from clinical practice, while those of topological psychology come from the experimental situation. This accounts, I believe, for the strong and the weak points of

each. Clinical practice gives the problems of the psychoanalysts their great vitality and undoubted significance. Clinical practice, however, is fraught with sources of error. In every medical specialty exactness and precision have followed the introduction of experimental procedures. If the experimental method is applicable to neuroanatomy and physiology, why should it not be applicable to psychology? That it will be is the hope of the topological psychologist. [From J. F. Brown, "Psychoanalysis, topological psychology and experimental psychopathology," *Psychoan. Quart.*, 6: 227–237, 1937.]

From the earlier papers by topological psychologists, certain experimental verifications of psychodynamic theory are possible. In the famous experiments on the memory value of completed and of interrupted tasks Zeigarnik gives support to the psychoanalytic contention that unresolved psychic tension persists and influences future behavior. This has been adequately demonstrated clinically many times, but its experimental demonstration makes it even more convincing. Ovsiankina's work on resumption of interrupted tasks brings us to the same conclusion. Hoppe's experiments on level of aspiration show the importance of social and hence psychodynamic factors in aspiration, performance, the effect of competition, and the experiences of success and failure. Mahler's experiments on the compensatory value of fulfillment of tensions at various levels of aspiration give us a possible wedge with which to study sublimation. The author's study (1933) of the dynamic properties of various levels of reality gives us a tool for investigating conflict at different levels of emotional urgency. Dembo's work on rage is of exceptional importance in that complete frustration of humans was observed by her for the first time. The above lines simply indicate some of the interrelations between topological experimental psychology and psychoanalytic theory. There are many other papers and the serious student of psychopathology should avail himself of the original papers or at least read the extended summaries given in Lewin (1935), Hartmann, or by the author (1936*c*).

The direct application of topological psychology to psychiatric problems has been the most recent development. Rickers-Ovsiankina (1937) has reported work with schizophrenics, Escalona has made an analysis of manic-depressives with topological techniques. Lewin, Barker, and Dembo have studied regression on frustration in children. The author (1939*b*) has made a survey of the behavior of all the psychiatric categories in a frustrating situation. On the

basis of this study, he made the following conclusions, which are reprinted in order to give the reader some idea of the possible value of this type of work.

The results of the observations reported allow us to formulate the following tentative conclusions which are of general psychiatric interest.

1. The behavior of psychotic and psychoneurotic individuals in a frustrating situation is much more variable and unpredictable than is similar behavior by normals. Schizophrenic behavior is most variable of all in this respect. Furthermore, the behaviors shown by the variously diagnosed groups show so much overlap that diagnostic categories cannot be said to represent discrete disease entities but rather simply convenient points on some continuum such as regression or retreat from reality. That is not to be taken to mean that the various psychiatric categories vary *only* in this respect. There are undoubtedly other "dimensions" of personality than regressions. This conception of mental disease categories is becoming more and more generally accepted and may be said to be a basic concept of psychoanalytic and organismic psychiatry.

2. If the behavior demonstrated by our control group may be looked on as normal or adjusted, the various psychiatric categories may be ordered with regard to deviation from the normal. With regard to the functional psychoses the most deviate group is certainly the schizophrenic, the next most deviate the manic-depressive psychotic, and least deviate the paranoid psychotic. The obsessional-compulsion neuroses are most clearly distinguished from the control group among the psychoneuroses. This order follows almost exactly that first conceived by Abraham (1927) and later developed by many psychoanalysts to describe the depth of libidinal regression in the various mental diseases. Our results thus confirm the psychoanalytic classificatory psychiatry.

3. From the observations reported here there is developed the possibility of the approximate description of personality structure in the various psychoses through use of dynamic conceptions. In nearly every case, we have been able to characterize the ease of building and discharge of segregated tension systems, the level of aspiration, and the effect of social pressure upon it. These represent only first approximations and further refinements on technique must be found to objectify our rating scales. We have thus far developed only a semiobjective procedure whereby rough index figures may be assigned. From such indexes, which are of only topological significance at the present time, we may hope to proceed to real measurements in time. We believe that our observations indicate the validity of this type of approach in psychopathology and our next step must be further to validate and objectify the methods of observation.

[From J. F. Brown, "Reactions of psychiatric patients in a frustrating situation," *Bull. Menninger Clin.*, 3: 60–61, 1939.]

At the present time, studies of this nature are being continued at the Menninger Clinic and work of a similar nature is being undertaken by Dr. Adler at the Chicago Institute for Psychoanalysis.

7. Other Approaches

Besides the attack on problems of experimental psychopathology from the standpoint of topological psychology, other attacks by experimental methods are possible and may become very useful. Space permits only the listing of these methods and a few bibliographical references.

Questionnaire Studies.—The psychoanalytic theory has been "tested" in a series of questionnaires. The earlier ones of these proved little because the questions pertained directly to mechanisms which were unconscious. More recently questionnaires have been devised to check whether the attitudinal results of unconscious motives and infantile experiences are what the psychoanalytic theory demands. In general, these studies have supported the theory. Examples may be found in the work of Stagner (1938), Stagner and Katzoff, and Krout.

Experiments with Hypnosis.—Hypnosis can uncover the unconscious much more rapidly than psychoanalysis. Its therapeutic value is more questionable. There is no doubt that hypnosis has been held in disfavor and even disrepute by medical and psychological scientists in recent times. In a recent paper Erickson and Kubie point out how this lack of investigation of hypnosis is holding up experimental psychopathology. Hull's (1933) book summarizes the experiments of others and his own important ones in hypnosis. Dr. Milton Erickson (1937*a*, *b*, 1938, 1939*a*, *b*), in a long and impressive series of papers, shows the utility of hypnosis in experimental situations. Particularly interesting is his use of hypnosis to test psychoanalytic concepts. Freud (1933*b*) himself suggested the use of hypnosis and reports several experiments which corroborate his method.

Conditioned-reflex Methods.—French (1933) pointed out that certain of the concepts of conditioned reflexology could be translated into psychoanalytic terms. Hull and his students have attempted the translation of psychoanalytic concepts into conditioned reflexology. Reference has already been made to the use of animals in

such experiments. Miller, Sears, and Mowrer of Yale University have also done interesting work with humans in attempting to criticize psychoanalytic concepts experimentally with conditioned-reflex techniques.

Experiments on Human Frustration.—Besides the experiments reported from the topological standpoint, several interesting experiments on aggression and frustration have been undertaken. These are discussed in Rosenzweig (1935) and the symposium on frustration edited by Rosenzweig (1938). A series of papers entitled "Minor Studies in Aggression" and another entitled "Analysis of Approach and Avoidance Contacts" are currently appearing from the Yale University Laboratories. Many specific psychological researches on the nature of thought processes in the various psychoses have been undertaken. The work of Hanfmann and Kasanin, and N. Cameron (1938, 1939) is worthy of study here.

8. The Future Outlook for Psychodynamic Theory

We are living in a period of cultural crisis. What its outcome will be, no one knows. Many pessimists believe we are entering into a period of chaos, a new "dark age." Some optimists foresee a new and brighter culture as an inevitable outcome from the present confused world scene. This much is certain. Humanity has weathered crises in the past and has weathered them by inventing new adjustments and adaptations to the changing cultural environment. The crisis at the break up of feudalism was resolved through the application of the new physical science to problems of economic production and distribution. The present crisis is not due to the failure of physical science but to the lack of an applicable psychological and social science. It is hoped this book bears a great deal of evidence that in psychodynamic theory the groundwork for such a science has been accomplished. In the great discoveries of modern psychopathology we have perhaps found the tools which will enable the man of tomorrow to lead a fuller, happier life than does the man of today. As physical science removes the necessity of economic hardships from the world, psychological science may give us the insights necessary to love more greatly and to hate more wisely. If we learn to control our basic urges with greater wisdom we may create a world in which aggressivity and hostility are constructively displaced to the extent that our vast knowledge of the physical laws may be applied to making the world a place for constructive, adaptive living.

BIBLIOGRAPHY

ABRAHAM, K.: *Selected Papers*, Hogarth Press, London, 1927.

———: "The history of an impostor in the light of psychoanalytic knowledge," *Psychoanal. Quart.*, **4**: 570–587, 1935*a*.

———: "Amenhotep IV (Ikhnaton): A psychoanalytic contribution to the understanding of his personality and the monotheistic cult of Aton," *Psychoanal. Quart.*, **4**: 537–569, 1935*b*.

ADLER, A.: *Organ Inferiority*, Nervous and Mental Diseases Publishing Company, Washington, 1917*a*.

———: *The Neurolic Constitution*, Moffat, Yard & Company, New York, 1917*b*.

———: *Individual Psychology*, Harcourt, Brace & Company, Inc., New York, 1924.

———: *Understanding Human Nature*, Greenberg, Publisher, Inc., New York, 1929*a*.

———: *Science of Living*, Greenberg, Publisher, Inc., New York, 1929*b*.

———: *What Life Should Mean to You*, Little, Brown & Company, Boston, 1931.

ALEXANDER, F.: *Psychoanalysis and the Total Personality*, Nervous and Mental Diseases Publishing Company, Washington, 1930*a*.

———: "The neurotic character," *Int. J. Psycho-Anal.*, **11**: 292–311, 1930*b*.

———: "On Falstaff," *Psychoanal. Quart.*, **2**: 592–606, 1933.

———: "Concerning the genesis of the castration complex," *Psychoanal. Rev.*, **22**: 49–52, 1935.

———: *The Medical Value of Psychoanalysis* (rev. ed.), W. W. Norton & Company, Inc., New York, 1936.

———: "Psychoanalysis comes of age," *Psychoanal. Quart.*, **7**: 299–306, 1938.

———: "Psychoanalysis revised," *Psychoanal. Quart.*, **9**: 1–36, 1940.

ALEXANDER, F., C. BACON, G. W. WILSON, H. B. LEVEY and M. LEVINE: "The influence of psychologic factors upon gastro-intestinal disturbances: a symposium," *Psychoanal. Quart.*, **3**: 501–588, 1934.

ALEXANDER, F., and W. HEALY: *Roots of Crime*, Alfred A. Knopf, Inc., New York, 1935.

ALEXANDER, F., and H. STAUB: *The Criminal, the Judge, and the Public*, The Macmillan Company, New York, 1931.

ALEXANDER, F., et al.: "Emotional factors in essential hypertension," *Psychosom. Med.*, **1**: 93–198, 1939.

ALLPORT, F. A.: *Social Psychology*, Houghton Mifflin Company, Boston, 1924.

———: "Rule and custom as individual variations of behavior distributed upon a continuum of conformity," *Amer. J. Sociol.*, **44**: 897–921, 1939.

ALLPORT, G. W.: *Personality*, Henry Holt & Company, Inc., New York, 1937.

ANDERSON, J. E.: *Happy Childhood*, D. Appleton-Century Company, Inc., New York, 1933.

Association for Research in the Nervous and Mental Diseases: *Localization of Function in the Cerebral Cortex*, The Williams & Wilkins Company, Baltimore, 1904.

———: *Multiple Sclerosis*, Paul B. Hoeber, Inc., Harper & Brothers, New York, 1922.

———: *Schizophrenia*, Paul B. Hoeber, Inc., Harper & Brothers, New York, 1928.

———: *The Intracranial Pressure in Health and Disease*, The Williams & Wilkins Company, Baltimore, 1929*a*.

———: *The Cerebellum*, Williams & Wilkins Company, Baltimore, 1929*b*.

———: *Manic-Depressive Psychosis*, The Williams & Wilkins Company, Baltimore, 1931*a*.

———: *Schizophrenia*, The Williams & Wilkins Company, Baltimore, 1931*b*.

———: *Sensation: Its Mechanisms and Disturbances*, The Williams & Wilkins Company, Baltimore, 1935.

———: *The Pituitary Gland*, The Williams and Wilkins Company, Baltimore, 1938.

BABCOCK, H.: "An experiment in the measurement of mental deterioration," *Arch. Psychol.*, **117**: 105, 1930.

BAGBY, E.: *The Psychology of Personality*, Henry Holt & Company, Inc., New York, 1931.

BANCROFT, W. D., and G. H. RICHTER: "The colloid chemistry of insanity," *J. Physic. Chem.*, **35**: 1606–1623, 1931*a*.

BANCROFT, W. D., and A. E. RUTZLER: "The colloid chemistry of the nervous system, I," *J. Physic. Chem.*, **35**: 1185–1211, 1931*b*.

BARKER, R., T. DEMBO, and K. LEWIN: "Experiments in frustration and aggression," *Univ. Ia. Stud.*, (in press).

BARNACLE, C. H., F. G. EBAUGH, and F. LEINERE: "Association-motor investigation of the psychoneuroses," *Amer. J. Psychiat.*, **91**: 925–937, 1935.

BECK, S. J.: *Introduction to the Rorschach Method*, American Orthopsychiatric Association, New York, 1937.

———: *Personality Structure in Schizophrenia*, Nervous and Mental Diseases Publishing Company, Washington, 1938.

BENEDIK, T., and B. B. RUBENSTEIN: "Correlations between ovarian activity and psychodynamic processes," *Psychosom. Med.*, **1**: 243–270, 1939.

BENTLEY, A. F.: *Behavior, Knowledge, Fact*, Principia Press, Bloomington, Ind., 1935.

BENTLEY, M., and E. V. COWDRY: *The Problem of Mental Disorder*, McGraw-Hill Book Company, Inc., New York, 1934.

BERGLER, E.: *Die psychische Impotenz des Mannes*, Hans Huber, Berne, 1937.

BERGLER, E., and E. HITSCHMAN: *Frigidity in Women*, Nervous and Mental Diseases Publishing Company, Washington, 1936.

BERMAN, L.: *The Glands Regulating Personality*, The Macmillan Company, New York, 1928.

BERNHEIM, H.: *Suggestive Therapeutics*, G. P. Putnam's Sons, New York, 1899.

BERNREUTER, R. G.: "Theory and construction of a personality inventory," *J. soc. Psychol.*, **4**: 387–405, 1933.

VON BERTALANFFY, L.: *Theoretische Biologie*, Verlagsbuchhandlung Gebrüder Borntraeger, Berlin, 1932.

BLEULER, E.: *The Theory of Schizophrenic Negativism*, Nervous and Mental Diseases Publishing Company, Washington, 1912.

———: *Textbook of Psychiatry*, The Macmillan Company, New York, 1924.

BONAPART, M.: "The murders in Rue Morgue," *Psychoanal. Quart.*, 4: 259–293, 1935.

BORING, E. G.: *A History of Experimental Psychology*, D. Appleton-Century Company, Inc., New York, 1929.

BRAID, J.: *Neurypnology*, 1843.

BRETT, G. S.: *A History of Psychology*, 3 vols., The Macmillan Company, New York, 1912–1921.

BREUER, J., and S. Freud: *Studien über Hysterie*, 4th ed., F. Deuticke, Leipzig and Vienna, 1922.

BRICKNER, R. M.: *The Intellectual Functions of the Frontal Lobes*, The Macmillan Company, New York, 1936.

BRIDGES, J. W.: *An Outline of Abnormal Psychology*, R. C. Adams and Company, Columbus, Ohio, 1919.

BROAD, C. D.: *The Mind and Its Place in Nature*, Harcourt, Brace & Company, Inc., New York, 1925.

BROWN, J. F.: "The methods of K. Lewin in the psychology of action and affection," *Psychol. Rev.*, 36: 200-281, 1929.

———: "Über die dynamischen Eigenschaften der Realitäts- und Irrealitätsschichten. Untersuchungen zur Handlungs- und Affektpsychologie, XIV," ed. by K. Lewin, *Psychol. Forsch.*, 18: 2–26, 1933.

———: "Freud and the scientific method," *Phil. Sci.*, 1: 323-337, 1934.

———: "Towards a theory of social dynamics," *J. soc. Psychol.*, 6: 182-213, 1935.

———: "On the use of mathematics in psychological theory." *Psychometrika*, 1: No. 1, 77–90; No. 2, 7–15, 1936*a*.

———: "A methodological consideration of the problem of psychometrics," *Erkenntnis*, 4: 46–61, 1936*b*.

———: *Psychology and the Social Order*, McGraw-Hill Book Company, Inc., New York, 1936*c*.

———: "The modified Dembo technique: an application of topological psychology to experimental psychopathology," *Bull. Menninger Clin.*, 1: 212–219, 1937*a*.

———: "Psychoanalysis, topological psychology and experimental psychopathology," *Psychoanal. Quart.*, 6: 227–237, 1937*b*.

———: "Freud vs. Marx: real and pseudo problems distinguished," *Psychiatry*, 1: 249–255, 1938.

———: "Individual, group, and social field," *Amer. J. Sociol.*, 44: 858–867, 1939*a*.

———: "Reactions of psychiatric patients in a frustrating situation," *Bull. Menninger Clin.*, 3: 44–63, 1939*b*.

———: "Cooperation: the need in the world today," Cooperation Principles and Practices, *11th Yearbook of the National Education Association*, 1939*c*.

———: "The position of psychoanalysis in the science of psychology," *J. abnorm. (soc.) Psychol.*, 35: 29–44, 1940.

BROWN, J. F., and W. D. ORBISON,: "A program for the experimental psychological investigation of convulsion therapy," *Bull. Menninger Clin.*, 2: 151–154, 1938.

BROWN, S., and H. W. POTTER: *Psychiatric Study of Problem Children*, State Hospital Press, Utica, N.Y., 1930.

BRUNSWICK, R. M.: "A supplement to Freud's 'History of an infantile neurosis,'" *Int. J. Psycho-Anal.*, **9**: 439–476, 1928.

BÜHLER, C., and H. HETZER: *Kleinkinder Tests*, J. A. Barth, Leipzig, 1932.

BUMKE, O.: *Handbuch der Geisteskrankheiten*, Verlag Julius Springer, Berlin, 1928–1932.

BUROS, O. K., ed.: 1938 *Mental Measurements Yearbook*, Rutgers University Press, New Brunswick, N. J., 1938.

BUSCHKE, A., and F. JACOBSOHN: *Sex Habits*, trans. by Eden and Cedar Paul, Emerson Books, Inc., New York, 1933.

CAMERON, D. E.: *Objective and Experimental Psychiatry*, The Macmillan Company, New York, 1935.

CAMERON, N.: "Experimental psychology and medicine," *Psychol. Record*, **1**: 437–445, 1937.

———: "Reasoning, regression and communication in schizophrenics," *Psychol. Monogr.*, **50**: 1–34, 1938*a*.

———: "A study of thinking in senile deterioration and schizophrenic disorganization," *Amer. J. Psychol.*, **51**: 650–665, 1938*b*.

———: "Schizophrenic thinking in a problem-solving situation," *J. Ment. Sci.*, **85**: 1–24, 1939.

CANNON, W. B.: "The James-Lange theory of emotion: a critical examination and an alternative theory," *Amer. J. Psychol.*, **39**: 106–124, 1927.

———: *Bodily Changes in Pain, Hunger, Fear and Rage*, D. Appleton-Century Company, Inc., New York, 1929.

———: *The Wisdom of the Body*, W. W. Norton & Company, Inc., New York, 1932.

CARMICHAEL, L.: "Pragmatic humanism and American higher education," *Sch. & Soc.*, **48**: 637–646, 1938.

CARMICHAEL, L., and M. F. SMITH: "Quantified pressure stimulation and the specificity and generality of response in fetal life," *J. genet. Psychol.*, **54**: 425–434, 1939.

CARNAP, R.: "Die physikalische Sprache als Universal-sprache der Wissenschaft," *Erkenntnis*, **2**: 432–465, 1931.

———: "Psychologie in physikalischer Sprache," *Erkenntnis*, **3**: 107–142, 1932.

———: "On the character of philosophic problems," *Phil. Sci.*, **1**: 5–19, 1934.

CASSIRER, E.: *Substanzbegriff und Funktionsbegriff*, Verlag Cassirer, Berlin, 1910.

CHARCOT, J. M.: *Diseases of the Brain*, trans. by E. P. Fowler, William Wood & Company, Baltimore, 1878.

———: *Oeuvres complètes*, Louis Battaille, Paris, 1892.

CHENEY, C. O.: *Outlines for Psychiatric Examinations*, State Hospital Press, Utica, N. Y., 1934.

CHIDESTER, L.: *The Structure of the Personality in Mentally Retarded Children*, unpublished Ph.D. thesis, University of Kansas, 1937.

CHILD, C. M.: *Physiological Foundations of Behavior*, Henry Holt & Company, Inc., New York, 1929.

CLARK, L. P.: "A pyschological interpretation of essential epilepsy," *Brain*, **43**: 38–49, 1920.

COGHILL, G. E.: *Anatomy and the Problem of Behavior*, The Macmillan Company, New York, 1929.

CONKLIN, E. S.: *Principles of Abnormal Psychology*, rev. ed., Henry Holt & Company, Inc., New York, 1935.

COOK, S. W.: "The production of 'experimental neurosis' in the white rat," *Psychosom. Med.*, **1**: 293–308, 1939.

COWDRY, E. V.: *Problems of Aging*, William Wood & Company, Baltimore, 1939.

CRANE, H. W.: "The concept of social adjustment in relation to the defining and diagnosing of mental deficiency," *Proc. Amer. Ass. Stud. ment. Def.*, **44**: 178–183, 1939.

CROSS, W. L., ed: *Twenty-five Years After*, Doubleday, Doran & Company, Inc., New York, 1934.

CROWLEY, R. M.: "Psychoanalytic literature on drug addiction and alcoholism," *Psychoanal. Rev.*, **26**: 39–54, 1939.

DARROW, C. W.: "Continuous records of systolic and diastolic blood pressure," *Arch. Neurol. Psychiat.*, **38**: 365–370, 1927.

DAVIS, K. B.: *Factors in the Sex Life of Twenty-two Hundred Women*, Harper & Brothers, New York, 1929.

DAYTON, N. A.: "The first year of the new standard nomenclature of diseases in Massachusetts mental hospitals," *Amer. J. Psychiat.*, **92**: 589–613, 1935.

DEMBO, T.: "Der Ärger als Dynamisches Problem. Untersuchungen zur Handlungs- und Affektpsychologie," ed. by K. Lewin, *Psychol. Forsch.*, **15**: 1–144, 1931.

DEMBO, T., and E. HANFMANN: "The patient's psychological situation upon admission to a mental hospital," *Amer. J. Psychol.*, **47**: 381–408, 1935.

Department of Commerce, Bureau of Census: *Report on Patients in All Hospitals for Mental Disease:* 1936, Washington, 1938.

DEUTSCH, A.: *The Mentally Ill in America*, Doubleday, Doran & Company, Inc., New York, 1937.

DEUTSCH, F.: "Psychoanalyse und Organkrankheiten," *Int. Z. Psychoanal.*, **8**: 290–306, 1922.

DEUTSCH, H.: *Psychoanalysis of the Neuroses*, Hogarth Press, London, 1932.

———: "Psychologie der Manische-depressiven Zustände," *Int. J. Psycho-Anal.*, **17**: 358–371, 1933.

DEXLER, H.: "Zur Frage der Hysterie der Tiere," *Neurol. Zbl.* **26**: 1907.

———: "Zur Diagnostik der psychotischen Krankheiten der Tiere," *Prager Medezin. Wochenschr.*, 1908.

———: *Das Gestaltungsprinzip und die moderne Tierpsychologie*, Lotos, Prague, 1922.

DOLL, E. A.: "The Vineland social maturity scale," *Train. Sch. Bull.*, **31**: 1–7, 25–32, 48–55, 68–74, 1935.

DOLLARD, J.: *Caste and Class in a Southern Town*, Yale University Press, New Haven, 1937.

DOLLARD, J., et al.: *Frustration and Aggression*, Yale University Press, New Haven, 1939.

DOOLEY, L.: "Psychoanalytic studies of genius," *Amer. J. Psychol.* **27**: 363–416, 1916.

———: "The genesis of psychological sex differences," *Psychiatry*, 1: 181-195, 1938.

DORCUS, R. M., and G. W. SHAFFER: *Textbook of Abnormal Psychology*, The Williams & Wilkins Company, Baltimore, 1934.

DORLAND, W. A. N.: *The American Illustrated Medical Dictionary*, W. B. Saunders Company, Philadelphia, 1936.

DUBLIN, L. I., and A. J. LOTKA: *Twenty-five Years of Health Progress*, Metropolitan Life Insurance Company, New York, no date.

DUNBAR, H. F.: *Emotions and Bodily Changes*, new ed., Columbia University Press, New York, 1935.

———: "Psychoanalysis and the general hospital," *Psychiatry*, 2: 167–176, 1939.

DUNBAR, H. F., et al.: "The psychic component of the disease process (including convalescence), in cardiac, diabetic, and fracture patients," Part I, *Amer. J. Psychiat.*, 93: 649–680, 1937.

———: "The psychic component of the disease process (including convalescence), in cardiac, diabetic, and fracture patients," Part II, *Amer. J. Psychiat.*, 95: 1319–1342, 1939.

DUNLAP, K.: *Mysticism, Freudianism and Scientific Psychology*, The C. V. Mosby Company, St. Louis, 1920.

DURFEE, C. H.: *To Drink or Not to Drink*, Longmans, Green & Company, New York, 1937.

ELLIS, H.: *More Essays of Love and Virtue*, Doubleday, Doran & Company, Inc., New York, 1931*a*.

———: *Studies in Psychology of Sex*, F. A. Davis Company, Philadelphia, 1931*b*.

———: *The Psychology of Sex*, Emerson Books, New York, 1936.

ERICKSON, M. H.: "A study of clinical and experimental findings on hypnotic deafness. II. Experimental findings with a conditioned response technique," *J. gen. Psychol.*, 19: 151–167, 1938.

———: "The experimental demonstration of unconscious mentation by automatic writing," *Psychoanal. Quart.*, 6: 513–529, 1937*a*.

———: "Development of apparent unconsciousness during hypnotic reliving of a traumatic experience," *Arch. Neurol. Psychiat.*, 38: 1282–1288, 1937*b*.

———: "The induction of color blindness by a technique of hypnotic suggestion," *J. gen. Psychol.*, 20: 61–89, 1939*a*.

———: "An experimental investigation of the possible anti-social use of hypnosis," *Psychiatry*, 2: 391–414, 1939*b*.

ERICKSON, M. H. and E. M. ERICKSON: "The hypnotic induction of hallucinatory color vision followed by pseudo negative after-images," *J. exp. Psychol.*, 22: 581–588, 1938.

ERICKSON, M. H., and L. S. KUBIE: "The use of automatic drawing in the interpretation and relief of a state of acute obsessional depression," *Psychoanal. Quart.*, 7: 443–466, 1938.

———: "The permanent relief of an obsessional phobia by means of communications with an unsuspected dual personality," *Psychoanal. Quart.*, 8: 471–509, 1939.

ERIKSON, E. H.: "Observations on Sioux education," *J. Psychol.*, 7: 101–156, 1939.

ESCALONA, S.: "The effect of success and failure upon the level of aspiration behavior in manic-depressive psychoses," *Univ. Ia. Stud. Child Welf.*, vol. I (in press).

ESDAILE, J.: *Mesmerism in India and Its Practical Application in Surgery and Medicine*, 1848.

ESQUIROL, J. E. D.: *Des Maladies mentales*, J. C. Baillière et fils, Paris, 1838.

EVERETT, M. S.: *The Hygiene of Marriage*, Vanguard Press, New York, 1932.

FARIS, R. E., and H. W. DUNHAM: *Mental Disorders in Urban Areas*, University of Chicago Press, Chicago, 1938.

FEIGL, H.: "Logical analysis of the psychophysical problem," *Phil. Sci.*, **4**: 420–445, 1934.

FENICHEL, O.: *Outline of Clinical Psychoanalysis*, W. W. Norton & Company, Inc., New York, 1934.

———: "Problems of psychoanalytic technique," *Psychoanal. Quart.*, **7**: 421–442, 1938.

———: "Problems of psychoanalytic technique, II," *Psychoanal. Quart.*, **8**: 57–87, 1939*a*.

———: "Problems of psychoanalytic technique, III," *Psychoanal. Quart.*, **8**: 164–185, 1939*b*.

———: "Problems of psychoanalytic technique, IV," *Psychoanal. Quart.*, **8**: 303–324, 1939*c*.

FÉRÉ, C.: "Note sur les modifications de la tension électrique dans le corps humain," *Compt. rend. Soc. de Biol.*, **5**: 28–33, 1888*a*.

———: "Note sur les modifications de la résistance électrique sous l'influence des excitations sensorielles et des émotions," *Compt. rend. Soc. de Biol.*, **5**: 217–219, 1888*b*.

FERENCZI, S.: *Contributions to Psychoanalysis*, Richard G. Badger, Boston 1916.

———: *Further Contributions to Theory of Psychoanalysis*, Boni & Liveright, New York, 1928.

———: *Thalassa, A Theory of Genitality*, Psychoanalytical Quarterly Publishing Company, Albany, N. Y., 1938.

FERENCZI, S., and S. HOLOS: *Psychoanalysis and the Psychic Disorder of General Paresis*, Nervous and Mental Diseases Publishing Company, Washington, 1925.

FERENCZI, S., and O. RANK: *Development of Psychoanalysis*, Nervous and Mental Diseases Publishing Company, Washington, 1925.

FISHER, V. E.: *Introduction to Abnormal Psychology*, rev. ed., The Macmillan Company, New York, 1937.

FLÜGEL, J. C.: *Psychoanalytic Study of the Family*, Hogarth Press, London, 1935.

FRANZ, S. I.: "Symptomatological differences associated with similar cerebral lesions in the insane," *Psychol. Monogr.*, **19**: 1–80, 1915*a*.

———: "Variation in distribution of the motor centers," *Psychol. Monogr.*, **19**: 80–162, 1915*b*.

FRAZIER, J. G.: *The Golden Bough*, The Macmillan Company, New York, 1922.

FRENCH, T. M.: "Interrelations between psychoanalysis and the experimental work of Pavlov," *Am. J. Psychiat.*, **12**: 1165–1203, 1933.

——: "Psychogenic factors in asthma," *Amer. J. Psychiat.*, **96**: 87–98, 1939*a*.
——: "Social conflict and psychic conflict," *Amer. J. Sociol.*, **44**: 922–931, 1939*b*.
FREUD, A.: *Introduction to the Technique of Child Analysis*, Nervous and Mental Diseases Publishing Company, Washington, 1928.
——: *Introduction to Psychoanalysis for Teachers*, George Allen & Unwin, Ltd., London, 1929.
——: *Psychoanalysis for Teachers and Parents*, Emerson Books, New York, 1935.
——: *The Ego and Mechanisms of Defense*, G. E. Stechert & Company, New York, 1937.
FREUD, S.: *Selected Papers on Hysteria*, Nervous and Mental Diseases Publishing Company, Washington, 1909.
——: *Psychopathology of Everyday Life*, trans. by A. A. Brill, The Macmillan Company, New York, 1914.
——: *Psychosexual Study of Leonardo da Vinci*, Moffat, Yard & Company, New York, 1916*a*.
——: *Wit and Its Relation to the Unconscious*, Moffat, Yard & Company, New York, 1916*b*.
——: *History of the Psychoanalytic Movement*, Nervous and Mental Diseases Publishing Company, Washington, 1917.
——: *Introduction to Psychoanalysis*, Boni & Liveright, New York, 1920.
——: *Beyond the Pleasure Principle*, International Psychoanalytical Press, Vienna, 1922*a*.
——: *Group Psychology*, International Psychoanalytical Press, Vienna, 1922*b*.
——: *Collected Papers*, International Psychoanalytical Press, London, 1924*a*.
——: *Gesammelte Schriften*, International Psychoanalytical Press, Vienna, 1924*b*.
——: *Totem and Taboo*, New Republic, Inc., New York, 1927*a*.
——: *The Ego and the Id*, Hogarth Press, London, 1927*b*.
——: *General Introduction to Psychoanalysis*, Liveright Publishing Corporation, New York, 1927*c*.
——: *The Future of an Illusion*, Liveright Publishing Corporation, New York, 1928.
——: *Three Contributions to the Theory of Sex*, 4th ed., Nervous and Mental Diseases Publishing Company, Washington, 1930*a*.
——: *Civilization and Its Discontents*, Cope & Smith, New York, 1930*b*.
——: *The Interpretation of Dreams*, The Macmillan Company, New York, 1933*a*.
——: *New Introductory Lectures on Psychoanalysis*, W. W. Norton & Company, Inc., New York, 1933*b*.
——: *Autobiography*, W. W. Norton & Company, Inc., New York, 1935.
——: *The Problem of Anxiety*, W. W. Norton & Company, Inc., New York, 1936.
——: *Basic Writings of Sigmund Freud*, Modern Library, Inc., New York, 1938.
——: *Moses and Monotheism*, Alfred A. Knopf, Inc., New York, 1939.

FROMM, E.: "Authorität und Familie," in M. Horkheimer, *Socialpsychologischer Teil*, pp. 77–135, 230–238, Felix Alcan, Paris, 1936.

GARRETT, H. E., and M. R. SCHNECK: *Psychological Tests, Methods, and Results*, Harper & Brothers, New York, 1933.

GARRETT, H. E., and R. S. WOODWORTH: *Statistics in Psychology and Education*, Longmans, Green & Company, Inc., New York, 1930.

GARRISON, F. H.: *An Introduction to the History of Medicine*, W. B. Saunders Company, Philadelphia, 1924.

GILLILAND, A. R., and D. NELSON: "The effects of coffee on certain mental and physiological functions," *J. gen. Psychol.*, **21**: 339–348, 1939.

GLOVER, E.: *Technique of Psychoanalysis*, Baillière, Tindall & Cox, London, 1928.

———: *War, Sadism, and Pacifism*, George Allen & Unwin, Ltd., 1933.

GORTON, D. A.: *The History of Medicine*, G. P. Putnam's Sons, New York, 1920.

GREGOR, A.: *Leitfaden der Experimentellen Psychopathologie*, S. Karger, Berlin, 1910.

GREISINGER, W.: *Mental Pathology and Therapeutics*, The New Sydenham Society, London, 1867.

GRINKER, R. R.: *Neurology*, C. C. Thomas, Baltimore, 1934.

GRODDECK, G. W.: *Book of the Id*, Nervous and Mental Diseases Publishing Company, Washington, 1928.

GROTJAHN, M.: "Psychoanalysis and brain disease," *Psychoanal. Rev.*, **25**: 149–164, 1938.

———: "Psychoanalytic investigation of a seventy-one-year-old man with senile dementia," *Psychoanal. Quart.*, **9**: 80–97, 1940.

GUILFORD, J. P.: *Psychometric Methods*, McGraw-Hill Book Company, Inc., New York, 1936.

HAGGERTY, M. E., W. C. OLSON, and E. K. WICKMAN: *Haggerty-Olson-Wickman Behavior Rating Schedules*, World Book Company, Yonkers-on-Hudson, N.Y., 1930.

HAMILTON, G. V.: *Objective Psychopathology*, The C. V. Mosby Company, St. Louis, 1925.

———: *Research in Marriage*, Albert & Charles Boni, Inc., New York, 1929.

HARTMAN, G. W.: *Gestalt Psychology*, The Ronald Press Company, New York, 1935.

HEAD, H.: *Aphasia and Kindred Disorders of Speech*, The Macmillan Company, New York, 1926.

HEALY, W., A. F. BRONNER, and A. M. BOWERS: *The Structure and Meaning of Psychoanalysis*, Alfred A. Knopf, Inc., New York, 1930.

HEMPELMANN, F.: *Tierpsychologie*, Akademische Verlagsgesellschaft, Leipzig, 1926.

HENDRICK, I.: *Facts and Theories of Psychoanalysis*, Alfred A. Knopf, Inc., New York, 1939.

HENRY, G. W.: *Essentials of Psychopathology*, William Wood & Company, Baltimore, 1935.

HERTZ, M.: "Rorschach norms of an adolescent age-group," *Child Develpm.*, **6**: 69–76, 1935*a*.

———: "The Rorschach ink-blot test: historical summary," *Psychol. Bull.*, **32**: 33–66, 1935*b*.

HILDRETH, G. H.: *A Bibliography of Mental Tests and Rating Scales*, Psychological Corporation, New York, 1933.

HIRSCHFELD, M.: *Sexual Pathology* (trans. by Jerome Gibbs), Julian Press, New York, 1932.

HOCH, T. A.: "Mental mechanisms in dementia praecox," *J. abnorm. Psychol.*, **5**: 255–273, 1910.

HOFFMAN, A. C., B. WELLMAN, and L. CARMICHAEL: "A quantitative comparison of the electrical and photographic techniques of eye-movement recording," *J. exp. Psychol.*, **24**: 40–53, 1939.

HOLLINGSWORTH, H. L.: *Abnormal Psychology*, The Ronald Press Company, New York, 1930.

HOPKINS, P.: *The Psychology of Social Movements*, George Allen & Unwin, Ltd., London, 1938.

HOPPE, F.: "Erfolg. und Miserfolg. Untersuchungen zur Handlungs- und Affektpsychologie, IX," ed. by K. Lewin, *Psychol. Forsch.*, **14**: 1–62, 1930.

HORNEY, K.: "The denial of the vagina," *Int. J. Psychol-Anal.*, **14**: 57–70, 1933.

———: *The Neurotic Personality of Our Time*, W. W. Norton & Company, Inc., New York, 1937.

———: *New Ways in Psychoanalysis*, W. W. Norton & Company, Inc., New York, 1939.

HOSKINS, F. G.: *Tides of Life*, W. W. Norton & Company, Inc., New York, 1933.

HULL, C. L.. *Hypnosis and Suggestibility*, D. Appleton-Century Company, Inc., New York, 1933.

———: "Conflicting theories of learning: A way out," *Psychol. Rev.*, **42**: 491–516, 1935.

HUNT, J. MCV.: "Psychological experiments with disordered persons," *Psychol. Bull.*, **33**: 1–58, 1936.

HUNT, W. O.: "A critical review of current approaches to affectivity," *Psychol. Bull.*, **36**: 807–828, 1939.

HUSTON, P. E., D. SHAKOW, and M. H. ERICKSON: "A study of hypnotically induced complexes by means of the Luria technique," *J. gen. Psychol.*, **11**: 65–97, 1934.

HUTCHINGS, R. H.: *Psychiatric Word Book*, Utica State Hospital Press, Utica, N.Y., 1930.

IRWIN, O. C.: "The amount and nature of activities of newborn infants under constant external stimulating conditions during the first ten days of life," *Genet. Psychol. Monogr.*, **8**: 1–92, 1930.

ISAACS, S. S.: *Social Development in Young Children*, Harcourt, Brace & Company, Inc., New York, 1933.

JAMES, W.: *The Principles of Psychology*, Henry Holt & Company, Inc., New York, 1890.

JANET, P.: *The Mental State of Hystericals*, G. P. Putnam's Sons, New York, 1901.

———: *The Major Symptoms of Hysteria*, The Macmillan Company, New York, 1907.

———: *Principles of Psychotherapy*, The Macmillan Company, New York, 1924

———: *Psychological Healing*, The Macmillan Company, New York, 1925

JASTROW, J.: *The House That Freud Built*, Greenberg, Publisher, Inc., New York, 1933.

JELLIFFE, S. E.: "Some random notes on the history of psychiatry of the middle ages," *Amer. J. Psychiat.*, 10: 275–286, 1930.

JONES, E.: *Essays in Applied Psychoanalysis*, International Psycho-Analytical Press, London, 1923.

JUNG, C. G.: *The Psychology of Dementia Praecox*, trans. by A. A. Brill, Nervous and Mental Diseases Publishing Company, Washington, 1909.

———: *Studies in Word Associations*, Moffat, Yard & Company, New York, 1919.

———: *Psychological Types*, Harcourt, Brace & Company, Inc., New York, 1923.

———: *Modern Man in Search of a Soul*, Harcourt, Brace & Company, Inc., New York, 1933.

———: *The Integration of the Personality*, Farrar & Rinehart, Inc., New York, 1939.

KARDINER, A.: *Individual and His Society*, Columbia University Press, New York, 1939.

KARPMAN, B.: "Psychic impotence," *Psychoanal. Rev.*, 20: 271–303, 1933.

KASANIN, J., and E. HANFMANN,: "An experimental study of concept formation in schizophrenia. I. Quantitative analysis of the results," *Amer. J. Psychiat.*, 95: 35–48, 1938*a*.

———: "Disturbances in concept formation in schizophrenia," *Arch. Neurol. Psychiat.*, 40: 1276–1282, 1938*b*.

KEELER, L.: "Debunking the 'lie-detector,'" *J. crim. Law Criminol.*, 25: 153–159, 1934.

KENT, G. H., and A. J. ROSANOFF: *A Study of Association in Insanity*, Lord Baltimore Press, Baltimore, 1910.

KLEIN, M.: *Psychoanalysis of Children*, W. W. Norton & Company, Inc., New York, 1932.

KNIGHT, R. P.: "The dynamics and treatment of chronic alcohol addiction," *Bull. Menninger Clin.*, 1: 233–250, 1937*a*.

———: "Psychodynamics of chronic alcoholism," *J. nerv. ment. Dis.*, 86: 536–548, 1937*b*.

———: "The relationship of homosexuality to the mechanism of paranoid delusions," *Bull. Menninger Clin.*, 4: 149–159, 1940.

KOEHLER, W.: *Gestalt Psychology*, Liveright Publishing Corporation, New York, 1929*a*.

———: *The Mentality of Apes*, trans. by Ella Winter, Harcourt, Brace & Company, New York, 1929*b*.

KOFFKA, K.: *Principles of Gestalt Psychology*, Harcourt, Brace & Company, Inc., New York, 1935.

KRAEPELIN, E.: *General Paresis*, Nervous and Mental Diseases Publishing Company, Washington, No. 14, 1913.

———: *Lehrbuch der Psychiatrie*, 8th ed., J. A. Barth, Leipzig, 1915.

———: *Dementia Praecox*, E. and S. Livingston, Edinburgh, 1919.

———: *Manic-depressive Insanity and Paranoia*, E. and S. Livingston, Edinburgh, 1921.

KRAFFT-EBING, F.: *Psychopathia Sexualis*, Rebman Company, New York, no date.

KRETSCHMER, E.: *Physique and Character*, Harcourt, Brace & Company, Inc., New York, 1925.

KROUT, M.: "Typical behavior patterns on twenty-six ordinal positions," *J. genet. Psychol.*, **55**: 3–30, 1939.

KUBIE, L. S.: *The Practical Aspects of Psychoanalysis*, W. W. Norton & Company, Inc., New York, 1936.

LABARRE, W.: "The psychopathology of drinking songs," *Psychiatry*, **2**: 203–212, 1939.

LANDIS, C.: "The electrical phenomena of the skin," *Psychol. Bull.*, **29**: 693–752, 1932.

LANDIS, C., and J. D. PAGE: *Modern Society and Mental Disease*, Farrar & Rinehart, Inc., New York, 1938.

LANDIS, C., and H. N. DEWICK: "The electrical phenomena of the skin," *Psychol. Bull.*, **26**: 64–119, 1929.

LASHLEY, K. S.: *Brain Mechanisms and Intelligence*, University of Chicago Press, Chicago, 1929.

LEVEY, H. B.: "A critique of the theory of sublimation," *Psychiatry*, **2**: 239–270, 1939.

LÉVY-BRUHL, L.: *Primitive Mentality*, The Macmillan Company, New York, 1923.

———: *How Natives Think*, George Allen & Unwin, Ltd., London, 1926.

———: *The "Soul" of the Primitive*, The Macmillan Company, New York, 1928.

LEWIN, K.: *A Dynamic Theory of Personality*, selected papers trans. by D. K. Adams and D. E. Zenner, McGraw-Hill Book Company, Inc., New York, 1935.

———: *Principles of Topological Psychology*, McGraw-Hill Book Company, Inc., New York, 1936.

———: "Psychoanalysis and topological psychology," *Bull. Menninger Clin.*, **1**: 202–211, 1937.

———: *Conceptual Representation and the Measurement of Psychological Forces*, Duke University Press, Durham, N. C., 1938.

LEWIS, N. D. C.: *Research in Dementia Praecox*, National Committee for Mental Hygiene, New York, 1936.

LIDDELL, H. S.: "The experimental neurosis and the problems of mental Disorder," *Amer. J. Psychiat.*, **94**: 1035–1044, 1938.

LIÉUBAULT, A. A.: *Du Sommeil et états analogues considérés surtout au point de vue de l'action du moral sur le physique*, Paris, 1866.

LISSNER, K.: "Die Entspannung von Bedürfnissen durch Ersatzhandlungen. Untersuchungen zur Handlungs- und Affektpsychologie," ed. by K. Lewin, *Psychol. Forsch.*, **18**: 218–250, 1933.

LOGIE, H. B., ed.: *Standard Classified Nomenclature of Diseases*, compiled by the National Conference on Nomenclature of Disease, Commonwealth Fund, New York, 1933.

LONG, W. H.: *Sane Sex Life and Sane Sex Living*, Eugenics Publishing Company, Inc., New York, 1932.

LURIA, A.: *The Nature of Human Conflicts*, Liveright Publishing Corporation, New York, 1932.

MADDOX, J. L.: *The Medicine Man*, The Macmillan Company, New York, 1923.

MAHLER, W.: "Ersatzhandlungen verschiedenen Realitäts-grades. Untersuchungen zur Handlungs- und Affektpsychologie, XV," ed. by K. Lewin, *Psychol. Forsch.*, **18**: 26–89, 1933.

MAIER, N. R. F.: *Studies of Abnormal Behavior in the Rat*, Harper & Brothers, New York, 1939.

MAIER, N. R. F., and T. C. SCHNEIRLA: *Principles of Animal Psychology*, McGraw-Hill Book Company, Inc., New York, 1935.

MALINOWSKI, B.: *Sex and Repression in Savage Society*, Harcourt, Brace, & Company, New York, 1927.

———: *The Sexual Life of Savages*, George Routledge & Sons, Ltd., London, 1929.

MCDOUGALL, W.: *Outline of Abnormal Psychology*, Charles Scribner's Sons, New York, 1926.

MEAD, M.: *Coming of Age in Samoa*, Blue Ribbon Books, Inc., New York, 1932.

———: *Sex and Temperament in Three Primitive Societies*, William Morrow & Co., Inc., New York, 1935.

VON MEDUNA, L.: "Versuche über die biologische Beeinflussung des Ablaufes der Schizophrenie: Campher und Cardiazolkrampfe," *Z. ges. Neurol. Psychiat.*, **152**: 235, 1935.

MENNINGER, K. A.: *The Human Mind*, Alfred A. Knopf, Inc., New York, 1937*a*.

———: "Impotence and frigidity," *Bull. Menninger Clin.*, **1**: 251–260, 1937*b*.

———: *Man against Himself*, Harcourt, Brace & Company, Inc., New York, 1938.

———: "Emotional Factors in Hypertension," *Bull. Menninger Clin.*, **2**: 74–88, 1939.

———: "On the choice of a medical specialty," to appear 1940.

MENNINGER, K. A., and W. MENNINGER: "Psychoanalytic observations in cardiac disorders," *Amer. Heart J.*, **11**: 10–21, 1936.

MENNINGER, W.: "Psychoanalytic principle applied to the treatment of hospitalized patients," *Bull. Menninger. Clin.*, **1**: 35–43, 1936*a*.

———: "Psychoanalytic interpretations of patients in occupational therapy, recreational therapy, and physio-therapy," *Bull. Menninger. Clin.*, **1**: 148–157, 1936*b*.

———: *Juvenile Paresis*, The Williams & Wilkins Company, Baltimore, 1936*c*.

———: "Psychiatric hospital therapy designed to meet unconscious needs," *Amer. J. Psychiat.*, **93**: 347–360, 1936*d*.

MESMER, F. A.: *Mémoire sur la découverte du magnetisme animal*, 1781.

MEYER, A.: "Fundamental conceptions of dementia praecox," *Brit. med. J.*, **2**: 757–759, 1906.

———: "Constructive formulation of schizophrenia," *Amer. J. Psychiat.*, **78**: 355–364, 1922.

MILLER, M. L.: "Balzac's Père Goriot," *Psychoanal. Quart.*, **6**: 78–85, 1937.

MILLER, N. E.: *Experiments Relating Freudian Displacement to Generalization of Conditioning*, Institute of Human Relations, Yale University, New Haven, no date.

MILLER, N. E., J. BROWN, S. G. KLEBANOFF, and H. LIPOFSKY: "Indecision and conflict," *Yale Sci. Mag.*, **13**: 8–10, 22–23, 1939.

MILLER, N. E., and R. BUGELSKI: "Minor studies of aggression. II. The influence of frustrations imposed by the in-group on attitudes expressed toward out-groups" (in preparation).

———: "Minor studies of aggression. IV. Some effects of frustrations experimentally produced by unsuccessful cooperation and competition" (in preparation).

MONEY-KYRLE, R. E.: *The Development of the Sexual Impulses*, Harcourt, Brace & Company, Inc., New York, 1932.

MORGAN, J. J. B.: *The Psychology of Abnormal People*, Longmans, Green & Company, New York, 1936.

MOSS, F. A., ed.: *Comparative Psychology*, Prentice-Hall, Inc., New York, 1934.

MOSS, F. A., and T. HUNT: *Foundations of Abnormal Psychology*, Prentice-Hall, Inc., New York, 1932.

MOWRER, O. H.: "An experimental analogue of 'regression' with incidental observations on 'reaction formation,'" *J. abnorm. (soc.) Psychol.*, **35**: 56–87, 1940.

MURPHY, G.: *A Historical Introduction to Modern Psychology*, Harcourt, Brace & Company, Inc., New York, 1930.

MURRAY, H. A.: *Explorations in Personality*, Oxford University Press, London, 1938.

NEYMANN, C. A., and K. D. KOHLSTEDT: "A diagnostic test for introversion-extraversion," *J. abnorm. (soc.) Psychol.*, **23**: 482–487, 1929.

NICOLE, J. E.: *Psychopathology*, William Wood & Company, Baltimore, 1934.

OLIVER, J. R.: "The psychiatry of Hippocrates. A plea for the study of the history of medicine," *Amer. J. Psychiat.*, **5**: 107–115, 1925.

OVSIANKINA, M.: "Die Wiederaufnahme unterbrochener Handlungen. Untersuchungen zur Handlungs- und Affektpsychologie, VI," ed. by K. Lewin, *Psychol. Forsch.*, **11**: 302–379, 1928.

———: "Studies on the personality structure of schizophrenic individuals. I. The accessibility of schizophrenia to environmental influences. II. Reaction to interrupted tasks," *J. gen. Psychol.*, **16**: 153–178, 179–196, 1937.

PAVLOV, I. P.: *Conditioned Reflexes*, Oxford University Press, London, 1927.

PEATMAN, J. G.: "On the predictive meaning of correlation," *J. gen. Psychol.*, **22**: 17–23, 1940.

PENROSE, L. S.: *Mental Defect*, Farrar & Rinehart, Inc., New York, 1934.

PFISTER, O.: *Expressionism in Art*, Kegan Paul, Trench, Trubner & Co., London, 1922.

———: *Some Applications of Psychoanalysis*, Dodd, Mead & Company, Inc., New York, 1923.

PIAGET, J.: *The Language and Thought of the Child*, Harcourt, Brace & Company, Inc., New York, 1926.

PINTNER, R.: *Intelligence Testing*, Henry Holt & Company, Inc., New York, 1931.

PRATT, C. C.: *The Logic of Modern Psychology*, The Macmillan Company, New York, 1939.

PRESSEY, S. L., and L. C. PRESSEY: "*Mental Abnormality and Deficiency*," The Macmillan Company, New York, 1928.

PRINZHORN, H.: *Bildnerei der Geisteskranken*, 2d ed., Verlag Julius Springer, Berlin, 1923.

RADIN, P.: *Primitive Religion*, Viking Press, Inc., New York, 1937.
RANK, O.: *The Myth of the Birth of the Hero*, Nervous and Mental Diseases Publication Company, Washington, 1914.
———: *Trauma of Birth*, Harcourt, Brace & Company, Inc., New York, 1929.
REIK, T.: "Über Charakteranalyse," *Int. Z. Psychoanal.*, **14**: 321–334, 1928.
———: "Why did Goethe leave Fredrica?" *Imago*, **15**: 225–248 1929.
———: *Rituals, Psychoanalytical Studies*, W. W. Norton & Company, Inc., New York, 1931.
RICHTER, C. P.: "A biological approach to manic-depressive insanity," in Association for Research in Nervous and Mental Disease, *Manic-Depressive Psychosis*, The Williams & Wilkins Company, Baltimore, 1931.
RICKMAN, J.: *The Development of the Psychoanalytic Theory of the Psychoses*, International Institute for Psychoanalysis, London, 1928*a*.
———: *Index Psychoanalyticus*, 1893–1926, Hogarth Press, London, 1928*b*.
RIVERS, W. H.: *Dreams and Primitive Culture*, Longmans, Green & Company, London, 1918.
———: *Instinct and the Unconscious*, Cambridge University Press, Cambridge, 1920.
———: *Conflict and Dream*, Harcourt, Brace & Company, Inc., New York, 1923.
———: *Psychology and Ethnology*, Harcourt, Brace & Company, Inc., New York, 1926.
ROHEIM, G.: *Social Anthropology*, Boni & Liveright, New York, 1926.
RORSCHACH, H.: *Psychodiagnostik*, Hans Huber, Bern, 1932.
RORSCHACH, H., and E. OBERHOLZER: "The application of the interpretation of form to psychoanalysis," *J. nerv. ment. Dis.*, **60**, 225–248, 259–379, 1924.
ROSANOFF, A. J.: *Manual of Psychiatry*, 7th ed., John Wiley & Sons, Inc., New York, 1938.
ROSENZWEIG, S.: "A test for types of reaction to frustration," *Amer. J. Orthopsychiat.*, **5**: 395–403, 1935.
ROSENZWEIG, S., et al.: "Frustration as an experimental problem," *Character & Pers.*, **2**: 126–160, 1938.
ROYCE, J.: *Outlines of Psychology*, The Macmillan Company, New York, 1911.
RUCH, S. M., and G. D. STODDARD: *Tests and Measurements in High School Instruction*, World Book Company, Yonkers-on-Hudson, N. Y., 1927.
RUCKMICK, C. A.: *The Psychology of Feeling and Emotion*, McGraw-Hill Book Company, Inc., New York, 1936.
SACHS, B.: *Nervous and Mental Disorders*, Paul B. Hoeber, Inc., New York, 1926.
SAKEL, M.: *The Pharmacological Shock Treatment of Schizophrenia*, Nervous and Mental Diseases Publication Company, Washington, 1938.
SAUDEK, R.: *Experiments with Handwriting*, William Morrow & Co., Inc., New York, 1929.
SCHILDER, P.: *Introduction to a Psychoanalytical Psychiatry*, Nervous and Mental Diseases Publication Company, Washington, 1928.
———: *Studien zur Psychologie und Symptomatologie der Progressiven Paralyse*, S. Karger, Berlin, 1930.
SEARS, R. R.: "Functional abnormalities of memory with special reference to amnesia," *Psychol. Bull.*, **33**: 229–274, 1936.

———: "Experimental studies of aggression. II. Ideas of reference," *J. soc. Psychol.*, 8: 389–400, 1937.

SEARS, R. R., C. I. HOVLAND, and N. E. MILLER: "Minor studies of aggression. I. Measurement of aggressive behavior," *J. Psychol.*, 9: 275–295, 1940.

SEARS, R. R., and P. S. SEARS: "Minor studies of aggression. V. Strength of frustration-reaction as a function of strength of drive," *J. Psychol.*, 9: 297–300, 1940.

SHEA, J. P.: *Toward a Dynamic Theory of Feeling and Emotion*, unpublished Ph.D. thesis, Univ. of Kansas, 1936.

SHUEY, H.: "An investigation of the Luria technique with normal and psychotic subjects," *J. abnorm. (soc.) Psychol.*, 32: 303–313, 1937.

SILVERBERG, W. V.: "The personal basis and social significance of passive male homosexuality," *Psychiatry*, 1: 41–53, 1938.

SOUTHARD, E. E.: "The mind twist and brain spot hypothesis in psychopathology and neuropathology," *Psychol. Bull.*, 11: 117–130, 1914.

SOUTHARD, E. E., and M. C. JARRET: *The Kingdom of Evils*, The Macmillan Company, New York, 1922.

SPRANGER, E.: *Types of Men*, trans. by P. J. W. Pigors, Mat. Niemeyer, Halle, 1928.

SPRATLING, W. P.: *Epilepsy and Its Treatment*, W. B. Saunders Company, Philadelphia, 1904.

STAGNER, R.: *Psychology of Personality*, McGraw-Hill Book Company, Inc., New York, 1937.

———: "The role of parents in the development of emotional instability," *Amer. J. Orthopsychiat.*, 8: 122–129, 1938.

STAGNER, R., and E. T. KATZOFF: "Personality as related to birth-order and family-size," *J. appl. Psychol.*, 20: 340–346, 1936.

STEDMAN, T. L.: *Practical Medical Dictionary*, 13th rev. ed., William Wood & Company, Baltimore, 1936.

STEKEL, W.: *Sex and Dreams*, Richard G. Badger, Boston, 1922.

———: *Psychoanalysis and Suggestion Therapy*, Kegan Paul, Trench, Trubner & Co., London, 1923.

———: *Peculiarities of Behavior*, Boni & Liveright, New York, 1924.

———: *Frigidity in Women*, Boni & Liveright, New York, 1925.

———: *Impotence in the Male*, Boni & Liveright, New York, 1927.

———: *Sadism and Masochism*, Boni & Liveright, New York, 1929.

———: *Sexual Aberrations*, Liveright Publishing Corporation, New York, 1930.

———: *Homosexual Neurosis*, rev. ed., trans. by James S. van Teslaar, Emerson Books, New York, 1933.

STEPHEN, K.: *Psychoanalysis and Medicine: A Study of the Wish to Fall Ill*, Cambridge University Press, New York, 1935.

STODDARD, G. D.: "The I.Q.: Its ups and downs," *Educ. Rec. Suppl*, 1: 44–57, 1939.

STRACHEY, J.: "Preliminary notes upon the problem of Akhenaten," *Int. J. Psychol-Anal.*, 20: 33–42, 1939.

STRECKER, E. A., and F. D. CHAMBERS: *Alcohol, One Man's Meat*, The Macmillan Company, New York, 1938.

STRECKER, E. A., and F. G. EBAUGH: *Practical Clinical Psychiatry*, P. Blakiston's Son & Company, Inc., Philadelphia, 1931.

SULLIVAN, H. S.: "Psychiatry: introduction to the study of interpersonal relations," *Psychiatry*, **1**: 121–134, 1938.

———: "The modified psychoanalytic treatment of schizophrenia," *Am. J Psychiat.*, **11**: 519–536, 1931.

SYMONDS, P. M.: *Diagnosing Personality and Conduct*, D. Appleton-Century Company, Inc., New York, 1931.

TARCHANOFF, J.: "Über die galvanischen Erscheinungen an der Haut des Menschen bei Reizung des Sinnesorgane und bei verschiedenen Formen der psychischen Tätigkeit," *Pflüg. Arch. ges. Physiol.*, 46: 46–55, 1890.

TAUSK, B.: "On the origin of the influencing machine in schizophrenia," *Psychoanal. Quart.*, **2**: 519–556, 1933.

TERMAN, L. M., and C. C. MILES: *Sex and Personality*, McGraw-Hill Book Company, Inc., New York, 1936.

THORNDIKE, L.: *The History of Medieval Europe*, Houghton Mifflin Company, Boston, 1928.

———: *Science and Thought in the Fifteenth Century*, Columbia University Press, New York, 1929.

THURSTONE, L. L.: *The Measurement of Attitude*, University of Chicago Press, Chicago, 1929.

TINKLEPAUGH, O. L.: "The self-mutilation of a male Macacus rhesus monkey," *J. Mammal.*, **9**: 293–300, 1928.

TITCHENER, E. B.: *Textbook of Psychology*, The Macmillan Company, New York, 1910.

TOLMAN, E. C.: *Purposive Behavior in Animals and Men*, D. Appleton-Century Company, Inc., New York, 1932.

TREDGOLD, A. F.: *Mental Deficiency*, William Wood & Company, Baltimore, 1929.

TROVILLO, P. V.: *Objective Criteria of Character Types*, unpublished M.A. thesis, University of Kansas, 1934.

TUCKE, J. B.: *The Insanity of Over-exertion of the Brain*, Oliver and Boyd, Edinburgh, 1894.

VAN de VELDE, T. H.: *Ideal Marriage*, trans. by Stella Browne, Covici, Friede, Inc., New York, 1933.

VARVEL, W. A.: "Suggestions toward the experimental verification of the Rorschach test," *Bull. Menninger Clin.*, **1**: 220–225, 1937.

WARKENTIN, J., and L. CARMICHAEL: A study of the development of the air-righting reflex in cats and rabbits," *J. genet. Psychol.*, **55**: 67–80, 1939.

WARREN, H. C.: *Dictionary of Psychology*, Houghton Mifflin Company, Boston, 1934.

WECHSLER, D.: *The Measurement of Adult Intelligence*, The Williams & Wilkins Company, Baltimore, 1939.

WECHSLER, I.: *A Textbook of Clinical Neurology*, W. B. Saunders Company, Philadelphia, 1928.

WHEELER, R. H.: *The Laws of Human Nature*, D. Appleton-Century Company, Inc., New York, 1932.

———: *Science of Psychology*, rev. ed., The Thomas Y. Crowell Company, New York, 1940.

WHITE, A. D.: *A History of the Warfare of Science with Theology in Christendom*, D. Appleton-Century Company, Inc., New York, 1910.

WHITE, W. A.: *Outlines of Psychiatry*, Nervous and Mental Diseases Publishing Company, Washington, 1935.

WILLIAMS, F. E.: *Soviet Russia Fights Neurosis*, George Routledge & Sons, Ltd., London, 1934.

WITTELS, F.: *Sigmund Freud*, Dodd, Mead & Company, Inc., New York, 1924.

———: The Neo-Adlerians, *Amer. J. Sociol.*, 45: 433–445, 1939.

WOHLGEMUTH, A.: *A Critical Examination of Psychoanalysis*, George Allen & Unwin, Ltd., London, 1923.

WOODWORTH, R. S.: *Contemporary Schools of Psychology*, The Ronald Press Company, New York, 1931.

WUNDT, W.: *Outlines of Psychology*, W. Englemann, Leipzig, 1902.

YERKES, R. M.: *The Great Apes*, Yale University Press, New Haven, 1934.

YULE, G., and M. G. KENDALL: *An Introduction to the Theory of Statistics*, Charles Griffin & Company, Ltd., London, 1937.

ZEIGARNIK, B.: "Uber das Behalten von erledigten und unerledigten Handlungen. Untersuchungen zur Handlungs- und Affektpsychologie, III," ed. by K. Lewin, *Psychol. Forsch.*, 9: 1–85, 1927.

ZILBOORG, G.: *The Medical Man and the Witch during the Renaissance*, Johns Hopkins Press, Baltimore, 1935.

———: "Ambulatory schizophrenia," *Psychiatry*, to be printed 1940.

ZUCKERMAN, S.: *The Social Life of Monkeys and Apes*, Harcourt, Brace & Company, Inc., New York, 1932.

ZWEIG, S.: *Mental Healers*, Viking Press, Inc., New York, 1932.

AUTHOR INDEX

A

Abraham, 24, 154, 177, 190, 204, 208, 217, 236, 330–331, 336, 368, 394, 399, 401
Adler, A., 15–16, 154, 197, 252–258, 268
Adler, D., 451
Alexander, 4, 56, 64, 68, 151, 154–155, 158, 160, 177, 185, 190, 197, 223, 250, 292, 350, 399–401, 403, 431, 437
Allport, F. H., 12, 16
Allport, G., 268
Anderson, 183
Angell, 5, 356
Aristotle, 123, 141–144, 163, 245

B

Babcock, 441
Bagby, 75, 77, 78
Balzac, 417
Bancroft, 63, 267, 323
Barker, 449
Barnacle, 440
Baudelaire, 415
Beck, 443
Beethoven, 416
Benedik, 249
Bentley, 22, 151, 268, 437
Bergler, 377
Berman, 267
Bernheim, 39, 42, 43, 152
Bernreuter, 441
Bertalanffy, 151
Bleuler, 84, 109, 263, 299, 310, 317, 318, 323, 340, 386, 441
Bonaparte, 249
Boring, 47
Bowers, 166–167, 177, 204
Brahms, 414
Braid, 38
Brett, 47
Breuer, 43, 75, 152–153
Brickner, 311
Bridges, 109, 133, 135, 346
Brill, 154
Broad, 49, 68
Bromberg, 47, 151
Bronner, 166–167, 177, 204
Brown, J. F., 14–15, 19, 22, 56, 67, 83, 141, 145, 151, 166, 249–250, 265–266, 431, 437, 440, 446–451
Brown, S., 281
Brücke, 153
Brunswick, 336
Bumke, 109, 299, 310
Buros, 441
Buschke, 374
Byron, 416

C

Cameron, D. E., 441
Cameron, N., 437, 452
Cannon, 126
Carlisle, 416
Cassirer, 141
Charcot, 39, 42, 43, 68, 152, 153
Cheney, 281
Chidester, 350
Child, 122
Clark, 350
Coghill, 111, 122
Conklin, 22, 47
Cook, 445
Cowdry, 22, 268, 350, 437
Crane, 415
Crowley, 402

D

Da Vinci (*see* Vinci, Leonardo da)
Dali, 416
Darrow, 438
Darwin, 48, 140, 416, 423
Davis, 379, 382
De Wick, 439
Dembo, 434–435, 449
Deutsch, A., 22, 30, 47, 275–276, 298, 339
Deutsch, Felix, 154, 249
Deutsch, H., 208, 299, 315, 336, 380
Dexler, 445
Dix, 33
Dollard, 249, 437
Dooley, 208, 424
Dorcus, 22, 68, 115–117
Dorland, 109
Dowson, 415
Dunbar, 4, 56, 65, 68, 249, 293, 350, 431, 437, 439
Dunham, 266, 368, 430
Dunlap, 250
Durfee, 402

E

Ebaugh, 109, 299, 310, 440
Einstein, 104, 145
Ellis, 181, 369, 374, 383, 421
Engels, 423
Erickson, 440, 451
Erikson, 217
Escalona, 449
Esdaile, 39
Esquirol, 32, 33

F

Faris, 266, 368, 430
Feigl, 51, 52, 68
Fenichel, 177, 298, 299, 315, 368, 383, 395, 400, 403
Féré, 439
Ferenczi, 62, 154, 177, 194, 208, 236, 248–249, 258, 298, 309, 349, 368, 373, 381
Fisher, 22, 68
Flügel, 236
Franz, 311
Frazer, 23
French, 439, 451
Freud, A., 180, 199, 208, 236
Freud, S., 24, 43–44, 47–48, 55, 68, 74–75, 83, 102, 105, 140, 149–168, 176–185, 189, 196, 198, 203, 207–208, 217, 221–228, 232–233, 236–239, 241–243, 245–250, 252–258, 261–262, 286, 288, 290, 294, 298, 299, 315, 350–331, 334, 336, 353, 357–358, 361, 364, 366, 368, 369, 381, 383, 394, 399, 401, 403, 405, 410–412, 421, 424, 427, 429–431, 451
Fromm, 249

G

Galen, 259
Galileo, 104, 139, 140, 144, 416
Gall, 260
Galvani, 37, 38
Gannt, 445
Garrett, 11, 441
Garrison, 47
Gauguin, 415
Glover, 189, 249
Goethe, 126, 415, 417
Gorton, 47
Gregor, 436
Griesinger, 33, 68
Grinker, 95, 114, 311
Groddeck, 237, 249
Grotjahn, 62, 68, 309, 350
Guilford, 11

H

Haggerty, 441
Hall, 154
Hamilton, 379, 437
Hanfmann, 435, 452
Hartman, G. W., 109, 449
Hartman, von, 165
Haydn, 415
Head, 95

Healy, 166, 167, 177, 204, 403
Helmholtz, 423
Hempelmann, 445
Henderson, 17
Hendrick, 177, 180, 208, 293, 298, 315, 368, 424
Henry, 299
Hertz, 441
Hildreth, 441
Hippocrates, 259
Hirschfeld, 383
Hoch, 263, 323, 336
Hollingsworth, 22, 250
Hollos, 62, 309
Hopkins, 249
Hoppe, 449
Horney, 208, 249–250, 351, 380, 430
Hoskins, 267
Hull, 141, 451
Hunt, J. McV., 437
Hunt, T., 22, 47, 68
Hunt, W. A., 135
Huston, 440
Hutchings, 109
Huyghens, 145

I

Irwin, 111
Isaacs, 180

J

Jacobsohn, 374
James, 125, 126, 262
Janet, 43, 47, 68, 357
Jarrett, 315
Jauregg, von, 60, 309
Jelliffe, 47
Jensen, 249
Jones, 154, 177, 208, 236, 403
Joyce, 421
Jung, 154, 256–258, 261–265, 268, 318, 323, 336, 432, 442

K

Kant, 423
Kardiner, 23, 266, 368, 430
Kasanin, 452
Katzoff, 451
Keeler, 438
Keller, 249
Kent, 442
Klein, 180, 189, 236
Knight, 334, 392, 402
Koehler, 109, 228–229, 444
Koffka, 109
Kohlstedt, 441
Kraepelin, 33, 34, 53, 68, 109, 299, 305, 310, 315, 317, 326, 344, 385, 432
Krafft-Ebing, 34, 181, 369, 383
Kretschmer, 262–265, 268, 323–324, 330, 432
Krout, 451
Kubie, 293, 298, 451

L

La Barre, 422
Landis, 6, 22, 274, 276, 298, 439
Lange, 126
Lashley, 111, 122, 311
Lautrec, 415
Lavater, 259
Leinere, 440
Levey, 411–412
Levy-Bruhl, 26
Lewin, Kurt, 22, 83, 141, 142, 151, 167, 183, 222, 238, 245, 403, 411, 434, 437, 447, 449
Lewis, 336, 437
Liddell, 445
Liebnitz, 165
Lieubault, 39, 42, 43
Lombroso, 260
Long, 374
Luria, 439–440
Lynch, 63

M

McDougall, 22, 68, 250, 267, 315
Maddox, 45
Mahler, 449
Maier, 445

Malinkowski, 23, 266
Marcinowski, 226
Marlowe, 415
Marx, 423
Mayer, 416
Mead, 23, 199, 266
Meduna, 267, 323, 325
Menninger, K. A., 4, 45, 46, 56, 65, 68, 130, 177, 234, 236, 249, 281, 298, 350, 368, 377, 401–403, 423, 431, 437
Menninger, W. C., 204, 281, 293
Mesmer, 37, 388
Meyer, 264, 323
Miles, 265, 441
Miller, M., 417
Miller, N., 445, 452
Money-Kyrle, 177, 208
Moore, 305
Morgan, 68, 109
Moss, 22, 47, 68
Mowrer, 445, 452
Mozart, 416
Müller, 15
Murphy, 47
Murray, 437

N

Nahn, 135
Newton, 104, 139, 145, 416, 423
Neymann, 441
Nicole, 262–264, 268, 424
Nietzsche, 165, 416
Noguchi, 305

O

Oliver, 47
Olson, 441
O'Neill, 417
Orbison, 440
Ovsiankina, 443, 449

P

Page, 6, 22, 274, 276, 298
Pavlov, 444–445
Penrose, 342, 350
Pfister, 424
Piaget, 26, 183
Pinel, 32, 33
Pintner, 339, 441
Plato, 123, 163, 245
Poe, 415
Potter, 281
Pratt, 52, 68
Pressey, L. C., 68, 281
Pressey, S. L., 68, 281
Prinzhorn, 424
Proust, 416–421
Putman, 154

R

Radin, 26, 45
Rank, 186, 249, 257–258, 298, 424
Reich, 403
Reik, 154, 249, 418
Richter, 330
Rickman, 177, 299, 368
Rivers, 266
Roback, 265, 403
Rodalie, 263
Roheim, 23
Rorschach, 262, 265, 440, 442–443
Rosanoff, 109, 298–299, 310, 324, 343, 348, 379, 442
Rosenzweig, 452
Royce, 125
Rubenstein, 249
Ruckmick, 135
Rush, 33
Ruskin, 416

S

Sachs, 225, 249, 424
Sakel, 267, 323, 325
Saudek, 265
Schilder, 62, 299, 315
Schneck, 441
Schneirla, 445
Schopenhauer, 165
Schumann, 416
Sears, 452

Shaffer, 22, 68, 115–117
Shakespeare, 201, 249, 406, 417
Shakow, 440
Shea, 126
Shuey, 440
Silverberg, 380
Southard, 50, 315
Spranger, 262
Spratling, 350
Spurzheim, 260
Stagner, 22, 451
Staub, 403
Stedman, 109
Stekel, 226–227, 237, 258, 381, 383
Stendhal, 417
Stephen, 26, 177, 190, 208
Stockard, 263
Stoddard, 350
Strachey, 24
Strecker, 109, 299, 310
Strindberg, 416
Sullivan, 151, 287, 325
Swinburne, 415
Symonds, 441

T

Tarchanoff, 439
Tausk, 336
Terman, 265, 441
Thorndike, 128
Thurstone, 441
Tidd, 325
Tinklepaugh, 444
Titchener, 125
Tolman, 141, 443
Treadgold, 342, 350
Trovillo, 440
Tshaikowsky, 416
Tuke, 33

V

Van de Velde, 374
Van Gogh, 416
Varvel, 440
Veblen, 416
Verlaine, 415
Villon, 415
Vinci, Leonardo da, 416

W

Wagner, 416
Warren, 109
Wechsler, D., 440–441
Wechsler, I. S., 95, 114, 311
Wheeler, 109, 167, 350
White, A. D., 25, 29, 30, 47
White, W. A., 109
Whitman, 416
Wickman, 441
Wilde, 416
Willemse, 263
Williams, 266, 430
Winkler, 47, 151
Wittels, 151, 177, 403
Wohlgemuth, 250
Wolfe, 415
Woodworth, 250
Wundt, 125, 432–433

Y

Yerkes, 443
Yule, 11

Z

Zeigarnik, 449
Zilboorg, 31, 47, 320, 403
Zuckerman, 444
Zweig, 47, 151

SUBJECT INDEX

A

Abnormality, concept of, 6–12, 209
Abulia, 119–120
Achromatopsia, 88
Aguesia, 90
Akinesthesia, 91
Akoasms, 89
Alcoholic psychoses, 314
Alcoholism, 57–60, 401–402
  physical effects of, 313–314
  psychology of, 59–60
Alexia, 94
Algolagnia, 134
  active, sadism, 134, 383
  passive, masochism, 134, 383
Alloplastic, 367
Alzheimer's disease, 312
Amaurosis, 88
Ambivalence, 159–160
Ambivert, 262
Amentia (*see* Hypophrenia)
Amimia, 118
Amnesia, 102
Amusia, 95
Anacusia, 89
Anal stage, 184–193
  anal expulsive and retentive, 185
  anal sexuality, traits derived from, 215–217
  as related to character, 392–396
Analytic psychology, 256–257
  relationship of, to individual psychology, 252–257
    to psychoanalysis, 256–257
Androgyny, 134
Anesthesia, definition of, 90
  sexualis, sexual frigidity, 133, 375, 376
Anorexia, 91
Anosmia, 91
Anxiety, definition of, 131–132
    (*See also* Neuroses)
Apathy, 127
Aphasias, 94–97, 118
  motor, 94, 118
  sensory, 95
Aphonia, 118
Apraxia, 118
Aprosexia, 98
Arteriosclerosis, 311, 345
Association, disorders of, 98–101
  method of free, 287–288
  tests, 442
Astasia-abasia, 119
Astigmatism, 88
Asymbolia, 95
Ataxia, 119
  gait, 119
  motor, 119
  static, 119
Atheotosis, 113
Atrophy, muscular, 112
Attention, disorders of, 98
Autoeroticism, 113
Autoplastic, 367

B

Barrier, 20–21
    (*See also* Field theory)
Bestiality, 134, 381
Bibliotherapy, 296
Bulimia, 91

C

Case history, criteria for, 280–283
Castration, complex, 196–197
  fear of, 195
Catalepsies, 120
  cerea flexibilitas, 120
  rigid, 120
Cathexis, 160

Cathexis, objective and narcissistic, 160
Characterology, 258–261
  psychoanalytic, 384, 388–396
  schools of, 261–265
Chorea, 313
Class theory (*see* Field theory)
Cognitive processes, 86
  disorders of, 87
Compulsions, 120–121
  in compulsive character, 398–399
  as related to obsessions, 120–121
Conflict, between ego, super ego, id, 165–177
  concept of, 21, 162
  resolution of, 169–177
  unconscious, 170–177
    (*See also* Dreams; Psychoanalysis)
Conscious, 166–177
Conversion, definition of, 171–172
    (*See also* Hysteria)
Convulsions, 113
Coprolalia, 118
Criminality, 402, 403
Cunnilingus, 382
Cycloid character, 397

D

Delirium exhaustion, 312
Delirium tremens, 314
Delusions, definition of, 106–107
    (*See also* Paranoia)
Dementia paralytica, 305
  symptomatology, 344–345
  therapy, 345
Dementia praecox, catatonia, 320–321
  hebephrenic form, 320
  paranoid form, 321
  simplex form, 320
    (*See also* Schizophrenia)
Dementia senilis, 134, 338
  differential diagnosis, 345
  etiology, 345
  history of its differentiation, 343–344
  incidence of, 344
Depression, 128–130
  mild, deep, and suicidal, 128–130
    (*See also* Manic-depressive psychosis)
Diagnosis, science of, 280–284
Diplopia, 88
Dipsomania, 120
Displacement, 168
  definition of, 175–176
Dreams, 288–289
Dysacusia, 89

E

Echolalia, 118
Education, as therapy, 296–297
Ego, concept of, 163–168
  ideal, 164
  regression of, 172
    (*See also* Conflict; Id; Super-ego)
Ejaculatio praecox, 377
Ejaculatio retardata, 377
Elation, 128–130
    (*See also* Euphoria; Manic-depressive psychosis)
Emotion, bodily changes in, 437–440
  fear and rage, 130–133
  psychology of, 124–135
  theories of, 125–126
Encephalitis, epidemic, 313
Epilepsy, 337
  differential diagnosis, 347
  etiology, 347–348
  history of its differentiation, 346
  incidence of, 346–347
  symptomatology, 347
  therapy, 348
Eros, definition of, 157–158
    (*See also* Hate; Love)
Euphoria, 128–130
    (*See also* Elation)
Exhibitionism, 134, 382–383
  active, 134
  passive, 134
Extroversion, concept of, 261–262
    (*See also* Introversion)

F

Fear, 130–133
  of castration, 195–198
  free floating, 131–132
    (*See also* Phobia)

Fellatio, 382
Femininity, 161
Fetichism, sexual, 134, 381–382
(*See also* Perversions)
Field, psychobiological, 20
social, 148
Field theory, criteria for, 141–148
in experimental psychopathology, 433–437
psychoanalytical theory as, 145–150
Foreconscious, 166–167
Frigidity, 375–376
(*See also* Perversions)

G

Gait, ataxic, 119
paretic, 119
steppage, 119
Genital stage, 185, 202–208, 217–221
(*See also* Anal stage; Oral stage)
Genius, definition of, 340
and neurosis, 412–416
psychoanalytic theory of, 410–412
studies of, 181, 404–424
Genotype, defined, 78–80
(*See also* Phenotype)
Gestalt psychology, relation of, to field theory, 145–148
to psychoanalysis, 446–449
Goal, 18–21
(*See also* Field theory)
Graphology, 260
Gynandry, 134

H

Habit, definition of, 115
disorders of, 115–118
motor language, 118–119
Hallucinations, alcoholic, 314
auditory, 96
definition of, 96–97
narcotic, 315
visual, 97
(*See also* Psychosis)
Hate, 161
(*See also* Love)
Hemianopsia, 88
Heredity vs. environment, 14–22
Hermaphoditism, 134
Homosexuality, 133, 378–381
(*See also* Perversion)
Huntington's chorea, 312
Hydrocephaly, 342
Hydrotherapy, 296
Hyperbulia, 120
Hyperesthesia, auditory, 89
cutaneous, 90
kinesthetic, 91
perceptual, 95
sexualis or eroticism, 133
visual, 88
(*See also* Perversion)
Hyperinsulinism, 312
Hypermnesia, 103
Hyperopia, 88
Hyperpathy, 127
Hyperprosexia, 98
Hypertension, psychogenic component in, 438
Hyperthyroidism, 312
Hypertonicity, 113
Hypnosis, experiments with, 451
as psychotherapy, 294–295
relationships to hysteria, 42–44
scientific theory of, 36–39
Hypoinsulinism, 312
Hypophrenia, 337–343
differential diagnosis, 342
etiology, 342–343
history of its differentiation, 339–340
incidence of, 340–341
symptomatology, 341–342
therapy, 343
Hypothyroidism, 312
Hysteria, anxiety, 364–365
etiology of, 364–365
symptomatology of, 364
case of conversion, 75–77
concept of, 39–42
conversion, 365–367
etiology, 365–367
symptomatology of, 365

Hysteria, Freud's "studies on," 75
hysterical character, 399
relationship to hypnosis, 42–44

I

Id, concept of, 163–168
(*See also* Conflict; Ego; Superego)
Ideas, fixed, 101
flight of, 99
(*See also* Delusions; Obsessions)
Identification, definition of, 174
Idiot, amaurotic, 342
definition of, 340
Illusions, definition of, 96
(*See also* Hallucinations)
Imbecile, definition of, 340
Impotence, 376
psychic, 377
Inconsequentiality, definition of, 101
Individual psychology, 252–262
relationship of, to analytic psychology, 256–257
to psychoanalysis, 252–262
Inferiority complex, 254–256
Inhibition, 169
Instinct, Freudian concept of, 156–162
(*See also* Hate; Love)
Intelligence, 17–18
distribution of quotients, 339–340
tests, 440–441
of social, 441
Introjection, definition of, 175
Introversion, concept of, 261–262
(*See also* Extraversion)

K

Kleptomania, 120
Korsakow's psychosis, 314

L

Latency period, 185, 198–202
Latent content, in dreams, 224
(*See also* Psychoanalysis, theory of dreams)
Libido, definition of, 157
regression of, 172
Lisping, 118
Logorrhea, 118
Love, 133, 161–162
anamolies of, 133–135
(*See also* Hate)
Luria technique, 439–440

M

Macrocephaly, 342
Manic-depressive psychosis, differential diagnosis, 329
etiological factors, organic, 329–330
psychological, 330–331
history of its differentiation, 325–326
incidence, 326–327
symptomatology, 327–329
therapy, 331–332
Manifest content, in dreams, 224
(*See also* Psychoanalysis, theory of dreams)
Masculinity, 161
masculine protest, 254
Masochism, 134, 383
"symbolic," 134
Masturbation, 382
Medicine, development of, 44–46
psychological, 45–46, 65–68
Memory, disorders of, 101–103
Meningitis, 313
Mental illness, statistics on, 5–6, 274–279
(*See also* Psychosis)
Mesmerism (*see* Hypnosis)
Microcephaly, 342
Mind, mind-body problem, 49, 66, 71
organismic solution of, 55–62
primitive, 25–27
Mongolism, 342
Mood, depressed, 128–130
disorders of, 128–130
elated, 128–130
Moron, definition of, 340
Motor processes, disorders of, 110–121
Mutism, 118
Myopia, definition of, 88

N

Narcissism, 160
early, 188–189
Necrophilia, 134
Neologisms, definition of, 100–118
Neurasthenia (*see* Psychoneuroses)
Neuroses, anxiety, 363–364
etiology of, 364
symptomatology of, 363–364
compulsion, 361–363
etiology of, 360–361
symptomatology of, 361–362
"experimental," 445–446
narcissistic and transference, 358–359
neurotic character, 399–401
obsessional, 359–361
etiology of, 360–361
symptomatology of, 359–360
organ, 348–350
true, 358
(*See also* Psychoneuroses)
Neurosyphilis, 60
meningovascular, 313
as psychological problem, 61, 304–309
Nosology, definition of, 281–282
problem of, 284
Nymphomania, in women, 133, 376–378

O

Objectivity, 161
Obsessions, definition of, 105–106
(*See also* Compulsions)
Occupational therapy, 296
"Oedipus situation," 187–188
(*See also* Psychosexual genesis)
Oral stage, 184–188
oral sexuality, traits derived from, 212–215
oral sucking and oral biting, 184–188
(*See also* Anal stage; Genital stage)

P

Pain, 161–162
Paralysis, 112
Paralysis agitans, 312
Paramimia, 118
Paramnesia, 103
Paranoia, differential diagnosis, 333
etiology, 333–335
history of its differentiation, 332
incidence, 332–333
paranoid character, 397–398
symptomatology, 333
therapy, 335
Paresis, 112, 303
differential diagnosis of, 308
etiology: organic, psychological, 308–309
paretic gait, 119, 306
paretic speech, 118, 306
paretic writing, 118, 306
symptomatology of, 306–308
therapy, 309
Paresthesia, auditory, 89
cutaneous, 90
Parorexia, 91
Pathoneuroses, 338, 348–350
Pedophilia, erotica, 134, 381
Penis envy, 197–198
Perception disorders of, 94–98
Perseveration, 101
Personality, characterologically disordered, 388–403
concept of, 12–14
endocrinological and biochemical approach to, 266–268
ethnological approach to, 265–266
genius, 412–416
neurotic, 353–355
normal, 220–221
perverse, 369–372
psychotic, 302–303
sociological approach to, 265–266
sources of, 14
structure of, 162–208, 302–303
tests of, 441

Perversions, sexual, 369–383
relation of, to character disorders, 399–401
to mental disease, 369–373
Phallic stage, 185, 193–198
(*See also* Anal stage; Genital stage; Oral stage)
Phenotype, defined, 78–80
(*See also* Genotype)
Phobia, case of, 77–78
definition of, 132
etiology of, 364–365
photophobia, 88
symptomatology of, 364
Photomata, 88–89
Phrenology, 260
Physiotherapy, 296
Pleasure, principle, 161
Preambivalent, 187
Presbyopia, 88
Priapism, 377
Projection, definition of, 175
Pseudographia, 118
Pseudolalia, 118
Psychasthenia (*see* Psychoneuroses)
Psychiatry, 271–299
problems of, in modern world, 274–280
psychoanalysis in, 285–293
training in, 272–274
Psychoanalysis, basic postulates of, 156–177
evidence for theory of, 178
history of, 152–155
of "normals," 179
acceptance by, 181
psychoanalytic mechanisms, 168–177
as psychotherapy, 155, 285–298
relation of, to analytic psychology, 256–257
to field theory, 145–150
to Gestalt theory, 145–150, 446–449
to individual psychology, 252–256
summary and criticisms of, 238–250
as systematic psychology, 155–177, 292–293
Psychoanalysis, as technique, 155
theory of art, 405–424
of dreams, 221–232, 288–289
of genius, 410–424
Psychogenic viewpoint, 34–36
solution of mind-body problem, 54–55
theory in psychiatry, 271–272
(*See also* Somatogenic era)
Psychoneuroses, 64
differentiae of, 351–355
frequency of, 278–280, 355–357
nosology of, 357–359
related to character defects, 396–399
Psychopathology, comparative, 433–446
of everyday life, 232–236
historical development of, 23–47
prerequisites to experimental, 432–437
scope of, 3, 21–22
topological approach to, 446–451
toward experimental, 427–432
Psychosexual genesis, Freudian theory of, 181–208
related to character disorders, 391–396
Psychosis, alcoholic, 314
concept of, 300–311
due to infections or intoxication processes, 313
due to new growth, 311
involutional melancholia, 336
manic-depressive, 129–130, 325–332, 376
organic factor in, 301–315
paranoia, 332–335
involutional, 336
primarily functional, 316–336
related to character defects, 396–399
schizophrenia, 62–64, 276, 317–325
senile, 343–345
situational, 335–336
statistics on, 274–279
traumatic, 310–311
with unknown or hereditary causes, 312

Psychotherapy, hypnosis as, 294–295
(*See also* Bibliotherapy; Hydrotherapy; Occupational therapy; Physiotherapy; Psychoanalysis, as psychotherapy; Sociotherapy; Recreational therapy)
Pyromania, 120

R

Rage, symptomatology of, 132–133
(*See also* Hate)
Rationalization, definition of, 173–174
Reaction formation, 168–171
definition of, 173
Reality, principle, 161
Recreational therapy, 296
Reflex, conditioned, methods in experimental psychopathology, 451–452
definition of, 114
disorders of, 114–115
list of, 116–117
psychogalvanic, 439
spinal, 114
voluntary and involuntary, 115
Regression, definition of, 172
ego, 172
libido, 172
Repression, 169–171
Resistance, 287–288
Respiration, studies of, 438–439
Romberg sign, 119
Rorschach test, 442–443

S

Sadism, 134, 383
"symbolic," 134
(*See also* Masochism)
Satyriasis, in man, 133, 376–378
Schizophrenia, differential diagnosis, 322
etiological factors, organic, 322–323
psychological, 323–324
frequency of, 3, 62, 276, 318–319
history of its differentiation, 317–318
psychology of, 62–63
schizoid character, 397
therapy, 324–325
treatment of, 63–64
Scotoma, 88
Sensation, disorders of, 87–93
equilibratory, kinesthetic, and muscle, 91
organic, 91
pain, pressure, temperature and touch, 90
smell, 91
taste, 90
Sociotherapy, 295–296
Somatogenic era, 33–34
(*See also* Psychogenic)
Somatogenic solution, of mind-body problem, 53–54
Somatogenic theory, in psychiatry, 271
Spasms, 113
Stammering, 118
Stuttering, 118
Subjectivity, 161
(*See also* Objectivity)
Sublimation, 168, 411–412
definition of, 172–173
Superego, concept of, 163–167
(*See also* Conflict; Ego; Id)
Suppression, 169
(*See also* Repression)
Symptoms, cause, meaning, and economy of, 74–78
definition of, 71–74
genotypical vs. phenotypical description of, 78–80
relation to syndrome, 74
terminology of, 80–82
Syndrome, definition of, 74
relation to symptoms, 74

T

Tabes dorsalis, 304
Thanatos, definition of, 158
(*See also* Hate)
Thought, disorders of, 103–107
obsessions and delusions, 103–107
Tics, 113
Tonus, atonicity, 112
muscle, 112
Topology, as approach to experimental psychopathology, 446–451
(*See also* Field theory; Gestalt psychology)

Transference, definition of, 174, 287–290
Tremors, 113
  intentional, 113
  writing, 118

U

Unconscious, 166–167
  racial, 256–257
    (*See also* Conscious; Foreconscious)
Unconscious conflict, 170–177

V

Vector, 20–21
    (*See also* Field theory)

W

Wish-fulfillment, in dreams, 222–232
    (*See also* Psychoanalysis, theory of dreams)

Z

Zooerasty, 134