The Personality factor in schizophrenia

Paul B. Olsson
University of Nebraska Medical Center

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THE PERSONALITY FACTOR IN SCHIZOPHRENIA

BY

PAUL B. OLSSON

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THE PERSONALITY FACTOR IN SCHIZOPHRENIA

INTRODUCTION

Few disorders are so sadly neglected by the medical profession as mental disorders; in regard to them the general practitioner frequently assumes an air of complete detachment, and does not hesitate to admit his ignorance of their mechanisms, their classification, their treatment. Psychiatry is apt to be considered a dubious blend of scientific and metaphysical formulations. (7)

In the United States in 1923, the federal census of patients with mental disease in institutions revealed a total of 267,617, or 241.8 per 100,000 population. (40) It has been reliably estimated that of the 7,000 infants born each day in the United States, about 270, or 1 in 26, eventually become incapacitated by abnormalities of the mind. It is known that 75,000 new patients are admitted annually to the state institutions for the insane. (42)

Dementia Praecox (Schizophrenia) represents 22% of all psychoses in first admission to mental hospitals, according to the United States Census Bureau. (30) In 1937 approximately 18.7% of all hospital beds in the
United States were required for victims of this single disorder—Schizophrenia.\(^{(24)}\) It was estimated by May\(^{(30)}\) in 1931 that the annual cost of taking care of these individuals was $40,000,000. In terms of total economic loss, it was estimated by Katsburg\(^{(24)}\) in 1937 that the disease costs approximately a million dollars a day in the United States alone. It cannot be denied that there exists in Schizophrenia a tremendous problem, economically as well as psychiatrically.

All medical men agree that the chief hope of success in treatment is earlier recognition of the disease.\(^{(24)}\) The progress of psychiatry and its orientation in the direction of early care and prophylaxis lead to special emphasis on the formative period of life when the personality is being molded favorably or unfavorably, is being unfortunately sensitized or fortunately immunized, and when the individual is acquiring his scheme of values and his habits of adaptation to the problems that confront him.\(^{(7)}\) This paper will attempt, by a consideration of this personality factor, to help correlate the etiological, diagnostic, prognostic, and prophylactic concepts existing in Schizophrenia, and to thereby assist in clarifying the disease entity as far as the general practitioner is concerned.
DEFINITION

It is very difficult, if not impossible, to define the term personality. Probably the best way to gain a concept of personality is to compare definitions and descriptions from several authors. Miles describes personality as the total expression, more or less well integrated, of the psycho-physical resources and potentialities of the individual.

Diathelm describes personality as the name given to individuation of the highest biologic development, the human body.

Bleuler identifies personality with ego. He states that most of our psychic functions have a continuity insofar as the experiences become connected with one another through memory, and insofar as they unite with a very firm and constantly present complex of memory picture and idea, namely the ego or the personality. To be exact, the ego consists of the engrams of all our experience, plus the actual psychism. The ego (or personality) really comprises our entire past in a very abbreviated form.

The following authors seem to run along a more common vein in their descriptions.

Amsden states that personality represents the
aggregate of those tendencies predisposing to those reactions which the individual has come habitually to display in the adjustment his life has required of him.

Petry (38) believes personality is a psychologic term; it concerns that which distinguishes or characterizes an individual in his relation to his environment and description of it is based upon the observation of certain habitual modes of expressive behavior.

Wile (48) says that personality itself is the expression of an interaction between man as a biologic mechanism and as a social organism.

Anderson (2) sums up the idea simply by stating that personality is generally regarded as a mode of responding to one's environment.

Gardner (12) describes personality as a condensed record of the individual's lifelong reaction to his environment and it is the crystallization of this constant interplay and contact. In a broader sense, it takes into account constitutional factors such as bodily structure and temperament, which, like many psychological traits, are largely inherited.

A more recent elaboration of the idea of an environmental response is that of White (47) in 1936: Personality is one of those names that in a sense everybody understands and knows what is meant, but in the
sense of the ability to translate that into a definition of unequivocal significance, it is undefinable. It might be described as incorporating the totality of the reactive possibilities of the individual at the psychological level. A better term would be "personality pattern", which refers to the pattern of the entire reactive possibilities of the organism at the psychological level.

Personality as an entity is not dependent upon the individual parts that go to make it up, as upon their relations, one to another.

Dr. Adolph Meyer\(^{31}\) elaborates the relationship of parts to whole in his psychobiological and psycho-dynamic conception of personality and behavior. He urges an empiric (common sense) view that the individual is to be studied as an "experiment in nature", an integrated whole of many activities (visceral, endocrine, sensory-motor, reflex, instinctive, psychological and social), each of which should be considered in relation to the living individual, and not as a foreign, detached subject. This view, psychobiologically, may be defined as a pluralistic, empiric approach, utilizing genetic-dynamic methods, to the study and treatment on all levels of the whole man with his activities as an integrated individual.
More briefly, we study the growth and development of the individual as an integrated whole. We study man in science as we see man in actual life, as a physical person, infant, child, adolescent, adult and aged, as the he or she in a group, as part of nature, and for everything that makes a difference in growth development and function.

"We find as the decisive principle of the specifically psychobiological fact of personality - function in the emergency of a system of symbolization and interrelations as meanings. All that which we know as thus integrated is to be studied for what it does and is. Taking this view, we are prepared to study the facts found in actual operation, the conditions under which they do or do not occur, the factors entering into the patterns, their working and the results and their modifiability, their formulation and their reconstitution as 'experiment of nature.'"

Meyer's interesting chart (p. 7) describes the psychobiological functioning as function of the person as a unit as opposed to the function of parts. This functioning is the result of organization, growth, metabolism and specialization of the personality. It is the emergence from lower integrative levels to the highest. It is more than a summation of these lower
Dr. Adolf Meyer's Chart of Individuation

Psychobiological Integration with
More or Less

1. Visual-Imagery
2. Verbal-Language
3. Conceptual-Planning

Consciousness-Mind-Thinking-Behavior with

function
as signs
with
meanings

Mentation
A hanging together of
Movement
Affecting
Effecting
Sensory Experience
Attitudes

Vegetative
(Including
Motion)

Biology

Vegetative Branch
(Including Osmosis)

Zoological Branch
(Including Motion)

(Growth, Metabolism, Reproduction)

Physics
(Mass and Motion)

Chemistry
(Specific Unit Formation)

INDIVIDUATION

WITH SYMBOLIZATION

AND MORE OR LESS CONSCIOUSNESS

SUBJECT ORGANIZATION

Segregation of Stimulus and Response
levels; it possesses all of their characteristics but is ultimately governed by laws of functioning applying explicitly to the resulting total functions of the individual.

Consequently, when we say we are interested in the behavior of an individual, we mean not only organs as detachable systems, but the functioning of the organism as a unit or person, with his instinctive drives, rhythms, intellectual equipment, his moods, his ambitions and opportunities to fulfill them; his habits, memories, hopes and dreams - that which makes up the biographic life-record. These are mentally integrated functions constituting the personality, and upon them and their way and means of working together, will depend the life adjustment of the person.\(^{(42)}\)

The view described by Meyer is a genetic-dynamic one, emphasizing personality as a growing process, a cumulative result of habit patterns and actions and reactions with which the individual faces his environment.
METHODS TO PERSONALITY STUDY

In 1913, Hoch and Amsden (16) devised a guide which they recommended for a study of the personality. This guide comprised eight main groupings, as follows:

1. General intelligence, knowledge and judgment
2. Output of energy
3. General attitude towards environment
4. Attitude towards self: inner mental life
5. Attitude towards reality
6. Mood: emotional reactions
7. Sex instincts
8. Feeling of inferiority

In 1923 Amsden (1) published a further article dealing with the Practical Value of the Study of the Personality in Mental Disorders, and in this he narrowed his previous conceptions under four main headings:

1. The intellectual faculties
2. Somatic demands (physical activities)
3. The individual's self-criticism and self-estimate
4. The urgency or imperative to adaptation

This scheme is difficult to improve upon and it could be summarized as follows:

1. In a description of intellectual activity, the points which we specially desire information about are:
(a) The readiness with which knowledge is acquired; (b) the power of retention; (c) the ability to be guided by past experience. These points can be elicited by having a detailed account not only of the patient's schooldays, but also of his business and family life. We want to determine whether the well-endowed type is able to co-ordinate his activity in a healthy-minded, constructive way, whether he is in touch with things as they are, or whether he is apt to be diffuse, absent-minded, lacking in purpose and easily side-tracked. The questions to elicit these various points must be left to the individual examiner.

2. The "somatic demands" concern themselves especially with motor activities and the demands of sex. Motor, or, better, psychomotor, activity involves the questions whether the patient was lively or sluggish, i.e. whether there was push and energy as evidenced by talkativeness and enthusiasm, or whether he was inert and lacked initiative; whether there has been much interest in sports, games, hobbies, or whether there has been idleness and lassitude. Regarding sex, it is important to know how much the topic has interested the patient, whether the reactions to it have been hygienic or unhygienic, whether there have been unhealthy habits,
actual and mental masturbation, prudishness or its opposite. Some importance has been attached to vaguer matters, such as nail-biting, and response to mucous-membrane stimulation - eating, drinking, smoking.

3. **Self-estimate and self-criticism** depend largely on comparing ourselves with others. Such comparison may bring with it a feeling of satisfaction, or a feeling of failure, according to whether the comparison is favourable or unfavourable. If the comparison is favourable, the reactions are likely to be capable and adequate, but if unfavourable, a variety of responses may be elicited. Either the individual may realise his deficiencies, and attempt to correct his shortcomings in a healthy way, or else the individual may shrink, become sensitive, self-effacing and dependent. Again, evasions and compensations may be called into being. A sidelight on these various aspects may be obtained by the knowledge of whether the person is greatly influenced by the opinion of others, whether he is proud, fussy, and makes much of discomforts. Other important sidelights are the individual's ability to make friends, the degree of easiness or uneasiness in the presence of strangers, and the tendency to jealousy. The questions of over-conscientiousness, and the ability to take advice, also come in.
4. The urgency or imperative to adaptation centres round the question why we need to adapt ourselves at all. This, as Amsden says, is the crux of the whole study, because it is just these tendencies which favour or impede adaptation which are so important. A constructive assertion of it is seen in ambition, courageousness and vigorousness generally. Where we find a diminution of such tendencies we must attempt to get some explanation for it.

The study of the genetic-dynamic personality of Adolph Meyer (31) is best approached through a guide devised by him.

1. General personality survey
2. Special analysis of the psychobiological assets
3. Range and fluctuation of fitness with regard to work, play, rest and sleep
4. Social relations and the relative role of self-dependence and social dependence
5. Sex development
6. The synthesis and balance of the personality
7. Difficulties and handicaps
8. Specific disappointments and reactions to them
9. Assets and tendencies, favorable and detractive traceable to:
   a. Heredity
b. Development defects

c. External influences

10. An enumeration of the events, experiences, and situations in life which constitute special dynamic complexes or determining tendencies, in the form of an index of the significant results of the personality study.

Oskar Diathelm (11) believes that it is important that one try to separate constitutional endowment and development from changes in the personality which are due to illness. In both normal and pathologically changed personalities one must determine to what extent some traits are modifiable or whether they are so ingrained that a change is impossible. One should evaluate the assets of the personality and then determine how they can be utilized for correction or neutralization of undesirable features. It is naturally essential not to be satisfied with the manifest traits, but also to consider possible latent tendencies which need to be taken care of or utilized. It is difficult to determine the actual constitutional endowment, that is, what is present at birth; but it is practically unimportant to distinguish between constitutional traits and traits belonging to the earliest development, as these traits are so ingrained that they form an unchangeable part of the personality.
The personality investigator deals not only with a cross section at the time of treatment, but also includes the historical development of the individual and his attitude to the future. One needs to know the family setting into which the patient was born, his individual development from infancy to the time he becomes a patient and the outstanding formative factors which seem to have played a role, for understanding of hereditary tendencies makes one aware of the personality traits which are so ingrained that they cannot be modified.

Methods of studying personality:

1. Intellectual resources
2. Emotional tendencies and temperament
3. Volitional and action tendencies, interests and strivings
4. Standards
5. Attitude to one's body and to the instinctive desires
6. Attitude to material needs
7. Attitude to oneself and ability to deal with oneself
8. Social needs and adjustment to the group
9. Assets and handicaps and personality synthesis

I. Intellectual Resources -
Resources for new acquirements and the adaptability
to new problems and conditions of life with utilization of the past and possibility of evaluating future needs; attitude in learning; appreciation of manual and mental activities; ability to record and retain; imagination; ideas; systematization.

II. Basic Mood -

May be cheerful or gloomy; changes in mood (cyclothymic, etc.); reaction - anger, etc.; ability to display sympathy.

III. General Behavior -

(closely related to mood and temperament. Distinguish active from quiet person (introvert, extrovert); try to avoid effort.

IV. Standards -

Refers to ethical, aesthetic and material needs; appreciation of beauty in art or literature.

V. Amount of interest in own body -

Interests, especially sex; individual tension curve.

VI. Material needs -

Wealth, social standing.

VII. Self-analysis (insight) -

Capacity for self denial; self dependence; self reliance; amount of energy and endurance; variety; fitting into society.

VIII. Social needs -

Self consciousness; ill at ease; self assertive
person; aggressiveness, arrogance, domineering. 

Submissive type; may be stubborn, quarrelsome. 

Being reserved; caution and suspiciousness; attitude toward authority. 

IX. Results of above: 

Degree of stability or lability, incongruity or uniformity, maturity or immaturity of personality may have two reaction tendencies in opposite directions. 

W. R. Miles\(^{(32)}\) sums up the important aspects of personality study thusly: 

1. What is the background, origin or history of the individual? 

2. What is his present status as to function? 

3. What are his potentialities and the total function possibility for the future? 

In addition he believes we need to consider body type, energy and physique, as well as motion, perception, memory, imagination and the capacity for comparing, combining and abstracting. We need to probe affectivity and motivation from the simple to the complex in attitudes and interests.
PERSONALITY TYPES

It is a common observation that no two personalities are exactly alike. In fact, a little study will show that there are wide variations; a deeper study will reveal that personalities can be grouped according to various criteria and that personality can be classified or typed according to these groupings.

Lewis contends that human beings, on the basis of development, repression, and regression, are divisible according to the main expressions of their personality, dependent upon these mechanisms, into four main groups:

(1) The normal or average character:
It is taken for granted that all individuals, at least in the present day and age, are subject to somewhat similar varieties of training which is in keeping with the laws of society and that this training at times is antagonistic to original, organic, biologic laws of growth, development and reproduction. The process of repression begins early and we may consider an individual as normal if through this process of repression and adjustment he is able to make the proper sublimation or use of his repressed or party inhibited original, instinctive tendencies for the good of himself and others. If he, in his life situation, is sufficiently successful
in his adjustment to enable him to conform with the laws of society on the one hand and to maintain a free conscience on the other, he could be considered as a normal person.

(2) The neurotic character (Alexander) or idiosyncratic personality (Healy):

There are certain other individuals whose numbers are legion who are looked upon by their fellow beings as odd, queer, eccentric personalities, who do not mix well in the ordinary social activities, but who do conform to the laws of their community on the one hand, and seem to be free from mental conflicts on the other. The difference in character is sufficient to invite various facetious and often derogatory remarks from others, but the odd individual himself has little or no insight into his condition and feels that he is normal or at least only a little queer. These individuals have been called by various authors the "neurotic character type", which is to say that the early repressions were not adjusted at the average normal level, but that there were neurotic tendencies which became, so to speak, absorbed into the personality, and there structuralized to the extent that the neurotic trait became a rigid part of the character, that is, it was accepted by the ego as normal and functions in this manner throughout a lifetime.
(3) The neurotic personality or unstable egocentric personality (Healy).

(Lewis did not discuss this type)

(4) The psychotic personality or psychotoid personality (Healy):

(Lewis did not discuss this type, but probably meant the types of personality found in frank insanity.

White (47) states that a personality type to be properly so-called, must include a pattern of action, which, relatively speaking, manifests itself in all the reactions of the individual.

Gardner (12) describes a normal personality thusly: The three principal functions of the psyche which constitute the personality makeup of an individual are the functions of thinking, feeling and acting, or what have usually been referred to as the attributes of intelligence, emotion and volitions. When an individual is endowed with all of these capacities to the extent that he can meet the demands of the community in which he lives, and adapt himself efficiently to the circumstances of constantly changing environmental influence, he may be said to possess a normal or well integrated personality makeup.

White (47) believes that the well rounded personality is the individual who is equally developed in all di-
rections, whose interests reach out everywhere, who is capable of commanding himself with his full forces with relation to any problem that life presents; whose characteristics are not over or under emphasized, but meet the situation with reactions on his part that are commensurate to the stimuli. These are few and far between and perhaps do not exist at all.

Among the types of personalities which vary from the normal, is the rigid personality, said by Muncie to be compounded in no fixed proportions of many factors such as obstinacy, aggressiveness, pride, sensitiveness, a rigid code of personal ethics, an inability to make concessions, a "hundred per cent attitude", etc.

The inability to demonstrate an organic basis for the disorders of Schizophrenia, manic-depressive and paranoia, has led to a more detailed study of the individual's background of these disturbances with an increasing emphasis on the importance of the underlying personality.

Kraepelin suggested a division of personality variations in Schizophrenic and manic-depressive types. Jung termed them introverts and extroverts, respectively. Others have designated the Schizophrenic type as schizoid or as a "shut-in" type; and the manic-depressive type as cyclothymic or syntonic personalities.
The Manic-Depressive, extrovert, cyclothymic or syntonic individual is governed by external circumstances. He is interested in situations and in other people. He seeks company and tends to be a mixer and a joiner. He reacts to unpleasant situations by positive action and tries to change the circumstances, or to alter his own course. He is exuberant and responds readily, sometimes excessively, to stimuli, but is often moody. (38)

The Schizophrenic, introvert, schizoid, or shut-in individual is governed by subjective factors. His interests and activities center around himself and he is in a large measure immune to external factors. He is seclusive and seeks solitude. He draws to himself in unpleasant situations. He tends to be unemotional. (38)

In an analysis of 50 cases each of Schizophrenia and Manic-Depressive, Petry (38) found that in the Schizophrenia 66% had a seclusive personality, with only 4% possessing a social personality. The balance were normal or otherwise abnormal. In the Manic-Depressives 60% had a social personality, 2% were seclusive and the rest were normal or otherwise abnormal. He believes that in the normal person, qualities of extroversion and of introversion are equally mixed.

Bond (5) in an analysis of 200 consecutive cases of Schizophrenia noted normal personalities in 29% and
seclusive type of personality in 50%.

Page (37), reviewing the statistics, finds that Hoch discovered 57% of 110 Schizophrenics to have a shut-in personality, as compared with 18% having normal personalities. Kirby found 50% typical personalities, while Bowman and Raymond, in analyzing 2000 of Schizophrenia state that 54% of these cases showed a seclusive personality. Hoch (17) sums up these results by stating that this shut-in makeup is not the only type of personality in which Dementia Praecox might develop, but it is the most frequent and is the most clearly circumscribed.

It is this type of personality with which we shall devote the remainder of this paper.
BASIC SCHIZOID PERSONALITY

General Concept

Schizophrenia is not a constitutional disease or a psychogenic reaction, but a disorder of the total personality resulting in dissociation of function up to complete dissolution. (9)

This disorder of the total personality is further described by Strecker & Ebaugh (42) as a reaction type - a maladaptation. Adolf Meyer (31) viewed Schizophrenia as a reaction type, the result of repeated failures of the individual to adapt to the environment.

As cited by Diathelm (10) he stresses the importance of the constitutional makeup which predisposes to this reaction, and of the life factors which cause them. He says "these patients are poorly socialized with a marked tendency to withdraw into preoccupations and day dreams. They lack healthy aggressiveness and constructive goals. Conflicts result from empty ambitions and inadequacy of performance. They have many unsatisfied longings and frequently strong feelings of inadequacy. A poorly directed instinctive life and untimely stirring up of instincts and longings result in habit conflicts which affect the balance of the total personality. In some cases the habit disorders preponderate; resulting in the
side-tracking and the curbing of leading interests and the creation of disastrous substitutions."

Evasions of the realities of life by the utilization of hypochondriacal trends, suspiciousness, fault finding, bizarre religious motivations, marked and pathological stubbornness, brooding, seclusiveness, etc. are prominent in the social maladaptations and life histories of the patients.

A fair cross-section of characteristic symptoms of Schizophrenia would be as follows: Seclusive makeup; defects of interest; discrepancies between thought, behavior and emotional reactions; emotional blunting; indifference; silliness; defect of judgment; hypochondriacal notions; suspiciousness and ideas of reference; odd, impulsive, negativistic conduct, usually without relation to observable emotional disturbance and often with a clear sensorium; autistic thinking, dream-like ideas, feelings of being forced or of interference with the mind from the outside, physical and mythical influences, etc. (42)

May (30) states that psychologically Schizophrenia is the reaction of an inadequate personality to the difficulties of his environment. This inadequacy is not demonstrable in the intellectual field, but expresses itself in an inability to react as the normal, well-
balanced personality does, to the difficulties encountered during the course of the educational, economic, sexual, emotional, domestic, or social life of the individual. The inadequate (Schizoid) personality defects may be classified as follows:

1. Educational: An inability to attain to the educational level consistent with the intellectual capacity of the individual feelings of intellectual inadequacy or inferiority. Failure of educational life in school or college.

2. Economic: The absence of any desire or ability to achieve a degree of economic success in life which is in any way commensurate with the intellectual capacity of the individual. This is variously expressed as financial difficulties, failure in occupational life, inability to obtain recognition and advancement, inability to obtain employment and hold positions, etc.

3. Sexual: The impossibility of adaptation to a normal sex life and adherence to accepted social and moral standards. Inability to meet the situations arising during puberty and adolescence; autoeroticism; homosexuality; extra-marital relations; unsatisfied or repressed sexuality; illegitimate pregnancy; venereal disease, etc.

4. Emotional (psychic traumata): A difficulty in
meeting the misfortunes and disasters of everyday life which should be reacted to adequately by the average individual without any abnormal disturbance of the equilibrium. Death or illness of relatives or friends, emotional shocks following storms, fires, burglary, assaults, accidents, murders, etc., results of imprisonment, physical disease, pregnancy, childbirth, etc.

5. Domestic: A lack of efficiency and judgment in the maintenance of normal domestic adjustment. Family quarrels and dissension, unhappy married life; infidelity, desertion, divorce; incompatibility; cruel abusive treatment.

6. Social: Failure of the individual to measure up to the social level warranted by his intellectual and educational advantages and adjust himself to the requirements and standards of organized society; antisocial tendencies; failure to occupy the place desired in society, church or politics; conflict with the law; criminality; alcoholism, drug addiction, etc.

Strecker & Ebaugh further delineates this Schizoid personality:

If one was to attempt in a few words to give a social cross section of the make-up of these individuals it might be fair to say that they did not meet the realities of their environments satisfactorily. Since
they seem to be the antithesis of the social, energetic type, the extrovert, we might label them, at least, temporarily, as introverts.

The person who tends to be a thinker rather than a doer is apt to be an introvert. Introversion means the turning-in of the mind or self onto its own problems. The introvert gets his chief pleasure from within himself - the extrovert, from without. The kingdom of the mind and thought or the external world are their respective spheres. Thought is pale, nonvital, unreal, to the one. Action is irrelevant or valueless to the other. The introvert is inclined to be cold, apparently gloomy, unsociable, and rather inactive. Their feelings are seemingly not strong and they do not express them readily. They are not the executives who get things done, but the planners and theorists. They are inclined to be the visionaries.

Each of us is more predominantly one or the other of these types, but most of us have elements of both. One type is not more desirable, admirable, or more useful than the other. The world needs both, like the conservatives and the progressives. The extroverts get things done, they are executives, the men of the world, the sociable, and cheerful people. The introverts are those who supply innovations and plan for the future.
The present belongs to the one, the future to the other. From the lack of sociability, and from their detachment, introverts see more clearly problems and solutions which never occur to the extroverts. The introverts are the dreamers and inventors. Many of the greatest discoveries have been made by them. Both types developed to the extreme are equally useless and harmful; the extrovert in senseless overactivity; and the introvert in aimless phantasy.

There is much similarity between the introvert and the conception of the schizoid of Bleuler and Kretschner. Bleuler writes of the schizoid as follows: "The schizoid retains his independence toward his surroundings; he strives to withdraw from the affective influence of the living as well as the dead environment and to pursue his own aims. In pathological states this may develop into active, hostile, or passive dereistic (de reor, away from reality) attitudes, and in milder forms it still leads to a seclusion from reality or to an active transformation of it for one's own aims, or to an adjustment to reality by means of inventions. The schizoid person may be persecuted or litigious, but he seeks and always finds new paths and outlets . . . the lack of respect for reality and for existing things leads on the one side to an effort to change them somehow, and on the
other hand to turn into oneself. In contrast to the syntonic (extrovert) who has the ability and will to live through his reactions to outer influences and thus settle them, the schizoid can keep them from discharging, thus saving the motive power for later times and then add it to the feelings tending in the same direction. He thus not only saves force but time and opportunity for reflection and modifications of past inner and outer circumstances."

The schizoid is not in himself mentally abnormal. "Thus, the expression schizoid now designates a type of psychic being and psychic reaction which exists in everyone more or less pronounced, in its morbid aggravation it manifests itself as schizophrenia, but in its milder development it is seen in the psychopath hitherto designated as schizoid without, however, reaching to the degree of being called a psychotic" (Bleuler). Nevertheless, the roots of schizophrenia are firmly embedded in schizoid soil.

The person who is schizoid to a dangerous degree does not find the world a pleasant place in which to live. He does not successfully meet reality and his sensitive nature shrinks from "the slings and arrows of outrageous fortune." Secretly he probably envies success in the abstract but he hesitates to take the
real concrete steps which make for this enviable state. With the dexterity of thought which he possesses he clothes everything in garments of idealism. Sex is beautiful but its actual physical contacts are not pleasant in his mind. Success in any field is desirable but competition is distasteful to him. Unquestionably there is always in his mental life the conflict between the desire to grasp the fruits of endeavor in every phase of life and the shrinking from the bold and positive efforts that must be made before the victory is secured.
Juvenile Manifestations

The general concept of a schizoid personality holds true for the child as well as for the adult. The usual history generally refers to the type of child showing introverted tendencies. The quiet, seclusive, shy, asocial child, who restricts his principal interests to himself and to the members of his family is a candidate for schizophrenia. He is the type of child who is not truly a part of the environment in which he is growing up. He is not a child's child; he does not play freely with children of his own age; he does not join in group activities or, if by chance he is drawn into a group, he follows, he does not lead others. He does not play "rough" games. Children, if they know him at all, recognize his gentility, a trait that is not infrequently the object of derision on the part of his associates. He is essentially a "mamma's" boy and if he does not voluntarily retire from group life, he is soon out in the periphery of its proceedings.

As he grows into late childhood, he continues to remain a home boy, one who attends school regularly, who always does his "home work" carefully, and one who likes to help mother in the performance of household duties (Oedipus complex). He may well become known for his studious inclinations and he may establish a routine in
the library with the same regularity that is set up in the class room. There is little of the gay, carefree spirit in him. On the contrary he is known as a placid, even-tempered boy, more inclined to enthusiastic outbursts upon the completion of a difficult scholastic assignment than upon the announcement of a holiday picnic. His heroes are fictional; they are rarely real characters, characters whose immediate presence can be felt and experienced.

In brief, this type of child does have emotions; indeed, the emotions may run very high, but there seems to be at least two characteristics of the emotions. In the first place, they are not given full expression objectively, but remain pent up in the child himself; he feels them but others are not aware of their intensity. In the second place, when he does permit the emotions outward expression, they are generally objectivated by a more or less impersonal (i.e. scholastic) vehicle.
Consideration of Schizoid Traits

In attempting to formulate a concept of schizoid personality, we have used such adjectives as "quiet", "shy", "reserved", "cold", "different", "unsociable", "seclusive" and the like. Although these are used in connection with a seeming majority of cases, they cannot be used in all cases. We would do well to consider these traits, both in relation to Schizophrenia to other psychoses and to normal individuals. (37)

Some indication is given by Page, et al. who examined by the questionnaire method, 100 Manic-Depressive patients, 125 Schizophrenic patients and 240 normal individuals. Their analysis of individual traits revealed that the normal and Schizophrenic groups each possessed about the same number of schizoid traits. They conclude from this that an analysis of individual traits fails to reveal a dichotomy of personality traits underlying Schizophrenic and Manic-Depressive patients. This means that either the Schizoid hypothesis is incorrect or that a questionnaire study of traits is not a valid means of checking that hypothesis.

A more detailed study was made by Kasanin & Rosen (23) who selected traits relating to five arbitrary criteria; friendship, recreation, reaction to social group, com-
municativeness, and sensitivity. The five characteristics delineating schizoid personalities were:

1. Few friends
2. Shyness
3. Seclusiveness
4. Close mouthed
5. Extreme sensitivity

Since the schizoid type of personality is considered a predisposing factor in Schizophrenia, it was to be expected that most of the cases with the special constellation of traits outlined would fall into the Schizophrenic group. 327 cases with all diagnoses were analyzed with the following results:

<table>
<thead>
<tr>
<th>Diagnoses</th>
<th>No. of Cases</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Schizophrenia</td>
<td>151</td>
<td>46.2</td>
</tr>
<tr>
<td>2. Manic-Depressive</td>
<td>79</td>
<td>24.2</td>
</tr>
<tr>
<td>3. Paranoia</td>
<td>12</td>
<td>3.7</td>
</tr>
<tr>
<td>4. Dementia Paralytica</td>
<td>17</td>
<td>5.2</td>
</tr>
<tr>
<td>5. Schizo-Affective Psychoses</td>
<td>28</td>
<td>8.5</td>
</tr>
<tr>
<td>5. Undiagnosed</td>
<td>23</td>
<td>7.0</td>
</tr>
<tr>
<td>6. Others</td>
<td>17</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>327</strong></td>
<td><strong>100.</strong></td>
</tr>
</tbody>
</table>

It was also discovered that of the 327 cases with all diagnoses, 33 patients (10.1%) had the typical schizoid personalities as outlined.
These 33 patients were in turn analyzed for diagnostic purposes with the following results:

<table>
<thead>
<tr>
<th>Diagnoses</th>
<th>No. of cases with Schizoid traits</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Schizophrenia</td>
<td>24</td>
<td>72.7</td>
</tr>
<tr>
<td>2. Manic-Depressive</td>
<td>2</td>
<td>6.1</td>
</tr>
<tr>
<td>3. Affective-Depressive</td>
<td>1</td>
<td>3.0</td>
</tr>
<tr>
<td>4. Paranoia</td>
<td>2</td>
<td>6.1</td>
</tr>
<tr>
<td>5. Schizophrenic-Manic-Depressive</td>
<td>2</td>
<td>6.1</td>
</tr>
<tr>
<td>6. Undiagnosed</td>
<td>1</td>
<td>3.0</td>
</tr>
<tr>
<td>7. Psychasthenia</td>
<td>1</td>
<td>3.0</td>
</tr>
</tbody>
</table>

The following facts may be derived from the above:

1. Of the 327 cases with all diagnoses, 151 cases or 46.2% were diagnosed as Schizophrenic.
2. Of the 327 cases with all diagnoses, 33 cases or 10.1% had the schizoid traits.
3. Of the 33 cases of schizoid traits, 24 cases or 72.7% were diagnosed as Schizophrenia.
4. Of the total number of 151 cases of Schizophrenia, only 24 cases or 15.9% had the schizoid traits.
5. Of the total number of 151 cases of Schizophrenia, 127 cases or 84.1% did not have the schizoid traits.

Since the constellation of traits which we have outlined does not fully describe the personality as a whole, a consideration of the other personality traits may throw some light.
The authors list the personality traits which occurred most frequently as a whole in their 151 cases of Schizophrenia.

### Childhood

<table>
<thead>
<tr>
<th>Traits</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Neurotic Traits</td>
<td>68.9</td>
</tr>
<tr>
<td>2. Extremely sensitive</td>
<td>52.3</td>
</tr>
<tr>
<td>3. Shy, followers</td>
<td>43.0</td>
</tr>
<tr>
<td>4. Chose to family</td>
<td>38.4</td>
</tr>
<tr>
<td>5. Few friends</td>
<td>33.8</td>
</tr>
<tr>
<td>6. Unusual attachments</td>
<td>29.8</td>
</tr>
<tr>
<td>7. Little self-assertiveness</td>
<td>27.1</td>
</tr>
<tr>
<td>8. Model child</td>
<td>26.4</td>
</tr>
<tr>
<td>9. Solitary amusements</td>
<td>25.2</td>
</tr>
<tr>
<td>10. Frequent day dreaming</td>
<td>23.8</td>
</tr>
</tbody>
</table>

### Adult

<table>
<thead>
<tr>
<th>Traits</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total abstainer</td>
<td>66.8</td>
</tr>
<tr>
<td>2. Close mouthed</td>
<td>65.6</td>
</tr>
<tr>
<td>3. Non-smokers</td>
<td>61.5</td>
</tr>
<tr>
<td>4. Extreme sensitiveness</td>
<td>56.8</td>
</tr>
<tr>
<td>5. Few friends</td>
<td>53.6</td>
</tr>
<tr>
<td>6. Shy, followers</td>
<td>51.2</td>
</tr>
<tr>
<td>7. Neurotic traits</td>
<td>50.4</td>
</tr>
</tbody>
</table>

-36-
8. Solitary amusements 43.2
9. Great ambitions 43.1
10. Close to family 39.2

On the whole, schizoid traits run higher in the group with schizoid personalities, according to analysis by standard deviation of the difference methods.

Other traits describing schizoid personalities:

<table>
<thead>
<tr>
<th>Trait</th>
<th>%</th>
<th>Trait</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stubborness</td>
<td>45.4</td>
<td>Retiring</td>
<td>24.2</td>
</tr>
<tr>
<td>Imaginative</td>
<td>45.5</td>
<td>Feels &quot;different&quot;</td>
<td>18.1</td>
</tr>
<tr>
<td>Unstable, moody</td>
<td>42.4</td>
<td>Broods</td>
<td>15.2</td>
</tr>
<tr>
<td>Timid, cowardly</td>
<td>42.4</td>
<td>Craves attention</td>
<td>15.2</td>
</tr>
<tr>
<td>Quiet</td>
<td>39.4</td>
<td>Irresponsible</td>
<td>15.2</td>
</tr>
<tr>
<td>Irritable</td>
<td>36.4</td>
<td>Quarrelsome</td>
<td>15.2</td>
</tr>
<tr>
<td>Suspicious</td>
<td>36.4</td>
<td>Immature</td>
<td>15.2</td>
</tr>
<tr>
<td>Conscientious</td>
<td>36.2</td>
<td>Pities self</td>
<td>12.2</td>
</tr>
<tr>
<td>Easily teased</td>
<td>35.2</td>
<td>Critical, sensitive</td>
<td>12.2</td>
</tr>
<tr>
<td>Serious</td>
<td>27.2</td>
<td>Selfish</td>
<td>12.2</td>
</tr>
<tr>
<td>Hurt by criticism</td>
<td>27.2</td>
<td>Avoids difficulties</td>
<td>12.2</td>
</tr>
<tr>
<td>Depressed, gloomy</td>
<td>27.2</td>
<td>Hard to manage</td>
<td>12.2</td>
</tr>
<tr>
<td>Well liked</td>
<td>24.2</td>
<td>Impractical</td>
<td>11.0</td>
</tr>
<tr>
<td>Wearisome</td>
<td>24.2</td>
<td>Frugal, saving</td>
<td>11.0</td>
</tr>
<tr>
<td>Dependent</td>
<td>24.2</td>
<td>Unclean</td>
<td>11.0</td>
</tr>
<tr>
<td>Studious</td>
<td>24.2</td>
<td>Domineering</td>
<td>6.0</td>
</tr>
<tr>
<td>Insecure</td>
<td>24.2</td>
<td>Prudish</td>
<td>6.0</td>
</tr>
<tr>
<td>Docile</td>
<td>24.2</td>
<td>Happy</td>
<td>6.0</td>
</tr>
<tr>
<td>Indifferent to opinion</td>
<td>6.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The following conclusions may be drawn from the above facts:

1. Only a small percentage (15.9%) of Schizophrenic patients have schizoid traits.

2. Therefore a person with the schizoid traits evidently has a smaller chance of developing Schizophrenia or any psychoses than a person who does not have these traits.

3. However, if a person with the traits does develop a psychoses, he has a 72.7% chance of developing Schizophrenia rather than any other type of psychosis.

4. A description of the schizoid personality by traits does not give a true picture of the personality or of its dynamic relation to the psychoses. Therefore, there must exist a specific factor (perhaps a constitutional predisposition or a diathesis) in the Schizophrenic patient. Schizoid traits, if present, aggravate or catalyze the specific factor.

5. Since persons with schizoid traits have an overwhelming tendency to develop Schizophrenia in preference to any other psychosis, and since these traits should be easily recognized, it would seem that if especial attention should be paid to these individuals at an early stage, an incipient Schizophrenia might be recognized and overcome.
**Heredity**

Although it is undoubtedly true that the whole question of heredity and its units, in relation to Schizophrenia is still very imperfectly understood \(^{(33)}\) yet it has been found by statistical evidence \(^{(50)}\) that inheritance is an important factor to be considered in the etiology of Schizophrenia. An average from the investigations of a number of authorities would indicate that there is a family history of mental disease, particularly in the siblings, in about one-half of the cases. \(^{(42)}\) Some authors \(^{(42)}\) \(^{(50)}\) state that psychoses occur three times as often in the family history of Schizophrenias as in the non-psychotic.

The evidence obtained from the application of mendelian theories to the investigation of the heredity course of Schizophrenia tends to indicate that the transmission of the factors for the creation of the anlage to Schizophrenia follows the course of mendelian recessive character. \(^{(42)}\) \(^{(3)}\)

In addition to the occurrence of well differentiated clinical forms of psychoses in the families of those who have schizophrenia, it has long been appreciated that there occur in these families individuals who are other-
wise definitely abnormal in their mental qualities. From the similarity of many of these abnormalities to qualities observed in the pre-psychotic character of schizophrenic individuals and their frequent occurrence among members of schizophrenic families, it has been suggested that these may be in a genotypic relation to the development of Schizophrenia.

In Barrett's series (3) it was found that abnormal character occurred as 21.24% of the tainting factors in Schizophrenia. This frequency is much greater than in the heredity tainting of other psychoses and nearly twice as great as occurs in manic-depressive psychoses (11.5%).

A conception of what is to be regarded as abnormal character is obviously one that must deal with qualities that are quite different in their nature and combinations. Within recent years it has become possible to differentiate more clearly between various qualities of abnormal character, from the formulations that have been made by Kretschmer (3) in his studies of temperament and character in their constitutional relationships in the schizophrenic and cyclothymic psychoses. Kretschmer's differentiation of the schizoid character as a constitutional quality which has its anlage in the germ plasm has made possible formulations and methods of in-
vestigation that bear directly upon the genetic problems of Schizophrenia. The schizoid character is determined by the interaction of a special quality of temperament with the experiences of life. This type of temperament is distinguished by the quality of its sensitiveness, which may vary between extreme sensitiveness and dullness of response. This emotional quality has its conditioning influence upon thought and behavior and leads to characteristic ways of reacting. These qualities, which in milder degrees are recognizable as average shaping influences on human character, may, when more pronounced, mold the personality in definitely abnormal directions. In such instances they distinguish an individual as one of abnormal character or in extreme manifestations as a schizoid psychopath.

Schizoid qualities of abnormal character occur with such frequency in the families of schizophrenic individuals and have in their characteristics so much that corresponds with qualities manifested in the schizophrenic disorder, both in pre-psychotic phases as well as in its course and terminal states, that it is important to ascertain the relation of these specific qualities to the phenotype schizophrenia. This aspect of genetic relations in schizophrenia has been investigated by Hoffman(3) in his study of the descendants of schizophrenic individuals and by Kahn(3) who has investigated more
particularly the interrelation of schizoid and schizophrenia in their heredity course. Hoffman sums up the results of his observations in formulations of the following theses:

1. Schizoid character anomalies occur among the children of a schizophrenic parent even if the other parent is not schizoid;

2. The crossing of a schizophrenic parent with a schizoid mate may give descendants among whom, although this is not exclusively so, schizoid types tend to predominate;

3. The combination of schizoid disposition with circular phenomena among the children of schizophrenic parents occurs only when the non-schizophrenic mate furnishes a reason for this.

In the contribution of Kahn the concept of schizoid is formulated as a complex of psychic qualities by which a definite pattern of life reaction is conditioned. The anlage for this is determined by the germ plasm and is an inheritable factor. His observations led him to the view that in a mendelian course schizoid qualities are transmitted as a dominant characteristic. He would consider the schizophrenic psychosis as being something more than schizoid, a qualitative rather than a quantitative difference. He suggests that in the anlage to schizo-
phrenia there are two components. One of these is the schizoid factor which is never absent and the other component is a specific factor that is in relation with the destructive process characteristic of the schizophrenic deterioration. In this way an explanation is suggested of the genotypic influence of the schizoid factor in the determination of the schizophrenic phenotype.

It is thus believed that in a schizophrenic family group schizoid abnormalities may link together scattered schizophrenic phenotypes and thus may make the genetic course of this disorder understandable in the character of a mendelian recessive heredity.
Habitus

The relationship of personality and psychosis to habitus (body type) has long been of interest. In fact, Petry (38) includes body type in his organic or heredity subdivision of personality itself.

According to Kretschmer (26) there are four main types of habitus:

1. The asthenic type: also called by different authors leptosome, linear, carnivorous, microsplanchnic or Glenard type. This type also corresponds to the slender, anatomic type of Willis. Clegg characterizes this type by lack of body breadth and thickness - the individual being unduly thin for his height, having a short, low head, narrow, oval-shaped face with increased length of nose. Willis states this type has a narrow back with a long narrow chest, a small costal angle, and a tall, slender, long body, often with a high palate, and hypertrophied tonsillar and adenoid tissue. Niles describes the glenard type as usually a young person of slight build who is thin, pallid and nervous. They are often neurasthenic and sometimes psychasthenic. The duties of life are accomplished with difficulty and nervous breakdowns are not uncommon. The normal lordosis of the lumbar spine is increased. There
is a compensatory relative kyphosis of the dorsal spine and the scapulae are prominent or "winged". The costal angle is acute, the abdomen is prominent, the muscle wall is thin and atonic. Visceroptosis is common.

2. The pyknic type: also called herbiverous, lateral, macrosplanchnic, Falstaff type, and the heavy anatomic type of Willis. This type is characterized by a relatively short, thick-set, large-trunked body. It is also characterized by a tendency to increased fat development about the trunk, short, slender limbs, and a shield-shaped pentagonal contour of the face.

3. The athletic type or normal anatomic type of Willis is a form intermediate between the asthenic and the pyknic types. It is not so easily differentiated, is essentially the tall, broad-shouldered, wide-chested, small-waisted habitus. It is also characterized by good muscle development, prominent bony relief, with small pelvis and a coarse skin.

4. The dysplastic type, a form dependent upon or associated with endocrine deviations, particularly dyspituitary, hypothyroid and eunochoid.

According to Kretschmer's findings, Schizophrenia occurs for the most part in individuals of the asthenic, athletic and displastic habiti, in contrast with manic-depressive states, which seem, by predilection, to ob-
tain in persons of the pyknic type.

Body Types in Schizophrenia and Manic-depressive Psychosis

<table>
<thead>
<tr>
<th>Body Type</th>
<th>Schizophrenia (175 cases)</th>
<th>Manic-depressive (85 cases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyknic</td>
<td>1.1</td>
<td>68.2</td>
</tr>
<tr>
<td>Pyknic (atypical)</td>
<td>1.7</td>
<td>16.4</td>
</tr>
<tr>
<td>Total pyknic</td>
<td>2.8</td>
<td>84.6</td>
</tr>
<tr>
<td>Asthenic</td>
<td>46.2</td>
<td>4.7</td>
</tr>
<tr>
<td>Athletic</td>
<td>17.7</td>
<td>3.5</td>
</tr>
<tr>
<td>Dysplastic</td>
<td>19.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Mixed and unclassified types</td>
<td>13.7</td>
<td>7.0</td>
</tr>
</tbody>
</table>

These findings are essentially the same as those found by Raphael, et al. (41)

Body Types in Schizophrenia and Manic-depressive Psychosis

<table>
<thead>
<tr>
<th>Body Type</th>
<th>Schizophrenia (60 cases)</th>
<th>Manic-depressive (60 cases)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyknic</td>
<td>5.0</td>
<td>43.3</td>
</tr>
<tr>
<td>Asthenic</td>
<td>13.3</td>
<td>5.0</td>
</tr>
<tr>
<td>Athletic</td>
<td>15.0</td>
<td>21.6</td>
</tr>
<tr>
<td>Dysplastic</td>
<td>10.0</td>
<td>1.6</td>
</tr>
<tr>
<td>Mixed and Unclassified</td>
<td>56.6</td>
<td>28.3</td>
</tr>
</tbody>
</table>

They conclude that from the analysis of the data of this study, assuming that in our series the factors
of race and age may be disregarded, it appears that in schizophrenia a rather definite type-trend of soma obtains differing in its nature strikingly from that occurring in manic-depressive material. This body organization on the whole tends towards the linear cast of habitus, with a relatively small narrow face and head and a long, narrow, shallow and less capacious type of trunk. This specificity of morphology may correlate an equally specific type trend of physiology and by that perhaps sheds a certain light upon the quality of personality schizophrenic psychoses.

It is however probably true that body type in itself does not essentially indicate good or ill health. There may be some relation between an ascetic build or a falstaffian form and temperament, and this indeed may enter into personality. But no one would assert that personality is responsible for body type, or that body type in itself determines personality.\(^{(48)}\)
PERSONALITY AND ETIOLOGY

The etiology of Schizophrenia is as much of a controversial topic today as it has been at any time since the disorder was first described by Kraepelin. (20)

Among the monistic views is that of Hutchings, et al. (20) who believe that Schizophrenia develops as an eccentric or malignant reaction of the personality to a threatened or actual appearance in consciousness of a repressed and long forgotten infantile incestuous attachment to the parent of the opposite sex, a mechanism which is recognized as the Oedipus complex.

Harry Stack Sullivan (45) has this to say of monistic views: "Any factor, innate or intercurrent, such as illness, perhaps certain endocrine dyscrasias, such as hypothyroidism, which effects a serious limitation in one's facilities for biological adjustive action may and does predispose to mental disorder, mild or severe. That we can go further than this along the lines of either a specific constitutional or a somatological determination of schizophrenic illness, I do not believe. Hereditary or somatological factors are probably contributory but may prove when we finally measure them, to be so general in their occurrence among the population as to be of slight importance."
A pluralistic view is offered by Strecker & Ebaugh\(^{(42)}\) as being the common sense one in regard to the controversial questions of heredity, congenital predisposition, constitution, infection, sex, trauma, urge to power, etc. as etiological factors.

One of the few facts available in a study of schizophrenia is that the schizophrenic maladjustment appears more frequently in a certain type of personality, a concept of which has been developed above. Laurence\(^{(27)}\) says frankly that the introverted, shut-in personality always on guard, limiting itself to solitary pursuits, never establishing intimate social contacts, exhibiting indifference or aversion toward the opposite sex, is the personality which in adversity develops into schizophrenia.

Harrowes\(^{(15)}\) believes that the problem of reaction is one of degree: That the psychosis and the personality are of the same stuff and that the psychosis can be looked upon as an extreme degree of difficulty of adaptation.

Muncie\(^{(34)}\) also states that the psychosis is an exaggeration of a life-long tendency. Hock\(^{(18)}\) also believes there exists a definite relationship between the mental characteristics of an individual and the type of psychosis which develops.
How early in life does this type of personality begin to develop? Harry Stack Sullivan\(^{(46)}\) states that "All in all we cannot find in the emotional development of infancy any useful key to the evolutionary explanation of the Schizophrenic processes. It is fairly well demonstrated that certain very grave deviations in personality have their source in the inter-personal relations which exist in the first year and a half of extra-uterine life. But the casual series of later schizophrenic processes so far as it passes through infancy seem wholly non-specific."

"Infantile maladjustments ensue in fundamental warp of the personality and load its development heavily in favor of later disaster. More than this we cannot say."

"It is first in the juvenile era - that phase of personality growth ushered in by the appearance of true socializing tendencies, manifested as strong motives making for adjustment in and within an environment of other juveniles - that we come upon factors in abundance pointing toward the evolution of schizophrenic illnesses. If any influence prohibits the satisfaction of the juvenile socializing tendencies, there ensues grave warp of personality of the sort which seems to be rather clearly related to the appearance of Schizophrenia. We have in the juvenile era the growth of a certain stabil-
ization of inter-personal adjutive processes which appear as the basis of 'personality type'.

Zimbler \((50)\) believes that "nobody can deny that the first experiences in childhood, the way of living, traditions, customs, social standards, cultural atmosphere, are apt to influence children in a formative manner and create behavior patterns. If the domestic conditions are unhealthy and some family members are mentally unbalanced, unusual changes may be precipitated and disturb the normally integrated individual, especially when they are constitutionally predisposed to a mental illness. Later in life one continues to use the same mechanism and pattern of reactions to difficulties."

How does the maladaptation finally result in the schizophrenic syndrome in a case of schizoid personality? \((42)\) Strecker & Ebaugh describe this in a striking manner: "We have indicated a few of the preliminary psychological considerations which seem to underlie the development of Schizophrenia. You will recall that first there is a personality introverted to a dangerous degree. This personality is badly equipped to come to grips with reality. Too often the unsuccessful struggle conditions a retreat and a yearning for that world of unreality and phantasy in which no effort is required to make dreams come true."
"Without doubt, sooner or later he comes to the crossroads of his mental life, and there must be some decision as to which path he will tread. Shall he continue the hard battle of facing reality or may he take the easier road? Already he has succumbed to the temptation of excessive day-dreaming. It is unreal but pleasing. In this way all the hard knocks of reality are made to disappear and his hurts are soothed.

"The schizoid, however, has great capacity for introspection. Thought is at once his greatest security and his greatest danger. One may picture the potential schizophrenic at this stage as courting unreality in his day-dreams. If his ultimate fate is to be schizophrenia, he loses some small part of his hold on reality almost day by day. Finally comes the time when judged by the criterion of the world as applied to himself, the verdict of failure is unescapable. His ego, still strong, cannot accept the conclusion that he did not succeed because, in truth, he could not face the struggle that is necessary.

"Theoretically we are now at the stage where the psychosis is about to come to his rescue. Soon even feeble attempts to dominate the real cease and the break from reality occurs. This break with the environment lessens the censorship of social criteria and inhibitions.
rapidly disappear and uninhibited regressive and primitive speech and forms of behavior are employed to express deeply underlying and often archaic trends."

What is the relation of the schizoid personality to the final precipitating cause or factor? Kasanin and Rosen\(^{23}\) and Strecker\(^{44}\) find that an abnormal personality occurred with greater frequency in these patients whose mental illness came on without adequate exciting factors. This is explained by Dr. May, quoted by Pollock who writes: "The immediate cause, so-called is usually a mere incident often not without some significance, but bearing little if any definite relation to the fundamental underlying condition responsible for a mental breakdown . . . In the constitutionally predisposed, the love affair, the loss of a position, the upsetting factor, whatever it may be, is merely the straw that breaks the camel's back, and is nothing more than an accident of fate, a pure coincidence. Any other comparatively trivial occurrence, out of the ordinary, any difficult situation which the make-up of the individual could not adequately meet and react to, would have accomplished the same result."

The matter is explained graphically by Strecker and Ebaugh. The individual is symbolized by a circle (A) and normality or sanity is equivalent to perfect con-
tact with reality or environment at every point. On the other hand, mental disease is synonymous with unreality (X) of which there are naturally many grades of severity, pictured by the smaller circles included within the circle (X). The zone of defense is the amount of resistance which a given individual is able to interpose against the development of a psychosis. It is obvious that the defense zone not only varies in different individuals but also that it cannot be static and therefore is never the same at any two periods in the life history of an individual. Its amount, or, diagrammatically, its thickness is dependent not only upon inherited, intrinsic and constitutional deviations and weaknesses, but also upon acquired, extraneous and environmental handicaps and liabilities among which must be included every possible type and degree of psychogenic stress and somatic

REALITY OR ENVIRONMENT

AB = Original Resistance
Eventually Reduced to CB

D = Final thrust
(somatic or psychic strain or stress)
From the environment.
strain. Thus, the development of a psychosis usually may be interpreted not as an acute process but as a gradual impairment of resistance, either because the latter was intrinsically insufficient to meet ordinary demands, or because the demands became too frequent and too severe, or, commonly, because both conditions existed. Once the resistance has become seriously diminished and impaired even an insignificant thrust from the environment may be sufficient to break through and then for reality or sanity there is substituted unreality or mental disease.
PERSONALITY AND DIAGNOSIS

An adequate clinical study at the present time takes for granted a systematic review of the environmental situation and a detailed analysis of the individual personality and its evolution is included in any satisfactory study of case material. To a large extent the study of any psychiatric patient becomes in the last analysis, a study of his personality.

The type of psychotic behavior may often be predicted from an understanding of the personality. A study of the settled behavior policies of the individual as represented in the personality is important to the psychiatrist for the reason that it furnishes a protocol of his reactional or adjustment probabilities. The psychotic behavior is often fruitfully interpreted only on the background of a knowledge of the personality.

Nowhere as much as in Schizophrenia are all individual symptoms to be evaluated in terms of their entire psychic environment. The chief differential diagnostic difficulty concerns manic-depressive psychosis. Theoretically and on paper the distinction is simple, but practically and in actual practice, it may for a long time be very difficult. The diagnostic factor of prime significance in differentiating manic-depressives from schizophrenics is the personality type.
In given cases, the diagnostic day is only saved by a careful review of the patient's life history in longitudinal sections. Here one may utilize advantageously an evaluation of the pre-psychotic personality. In the manic-depressive, the predominance of social, extroverted, and syntonic qualities and in the schizophrenic the prominence of asocial, introverted and schizoid traits.\(^{42}\)

If a long section perspective of the patient's life reveals repeated inabilities to face important concrete situations, culminating in one of the conditions that are looked upon as Schizophrenia, then that diagnosis is justified.
A close study of the personality is often fruitful and furnishes helpful prognostic guides. It is important to differentiate between a basic and constitutional seclusive make-up and one in which the withdrawal from socialization constitutes for the individual a somewhat logical protection against definitely inimical surroundings. Catatonic manifestations during the psychosis may be occasioned by the reappearance of deeply ingrained dispositional "stubbornness." Abnormality of personality, in itself, is not sure evidence of chronicity and a psychosis which seems prognostically unfavorable may be given, falsely, such an appearance by determining pre-psychotic idiosyncrasies of character. If the psychosis is in one sense an evolution of such peculiarities and there is no deterioration of personality, the outlook is not necessarily hopeless. (43)

Kahn and Cohen (22) believe that under favorable circumstances with fair evaluation of all given constitutional potentialities and environmental possibilities, therapeutic modification of the integration of the personality may sometimes be quite extensive. There is a relative decrease of potentiality for change with the progress of developmental complexity. If it is true that potentiality
for change ultimately determines the extent and adequacy of social adjustment, simple or complex, it may perhaps be usefully applied for theoretical as well as practical purposes.

As far as the rigid type of personality is concerned, Muncie believes that although in general the qualities are valuable, at the same time, they are like a two-edged sword, and many of the difficulties that beset the patient in his psychosis are directly attributable to them. Case histories were presented to show how certain traits such as pride, aggressiveness, sensitiveness, honesty, etc. have operated in the life histories of these patients determining certain reaction patterns and attitudes and also bringing about certain successes. Anger, aversion, stubbornness, paranoid delusional systems, and rut formations of all kinds are some of the manifestations of the rigid personality in trouble. This vein of inelasticity in every case jeopardized the happy outcome of the psychosis.

Kasanin and Rosen in 1933 compared recovery rates of all types of schizophrenic patients with schizophrenic patients who showed the presence of the five schizoid traits (see p.34) in their personality makeup. Results are as follows:
1. Patients with Schizophrenia traits 24.2 18.4
2. All U.S. Hospital Dementia Praecox patients 11.2 58.5
3. All Mass. State Hospital " Praecox patients 8.3 70.3

They concluded that in spite of the allegedly unfavorable constellation of traits in the schizoid personality, the recovery rate was higher than in an unselected group of schizophrenic patients on the basis of schizoid traits. In 1936 Hunt and Appell (19) analyzed 30 cases of schizophrenia patients, 15 of each sex, which were undiagnosed because of the even mixture of schizophrenic and manic-depressive features. Each case was followed up for at least 4 years following admission. Results are as follows:

<table>
<thead>
<tr>
<th></th>
<th>% Recovered</th>
<th>% Improved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exclusive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stubborn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feels Inferior</td>
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<tr>
<td>Dependent</td>
<td></td>
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<tr>
<td>Extrovert</td>
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<tr>
<td>Mixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Introvert</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Bite on Life</td>
<td></td>
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<td>-60-</td>
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They discuss the matter as follows: The recovered group definitely outnumbers the unrecovered group in the total of schizoid traits and in each trait recorded except seclusiveness. The recovered group shows an average of 1.45 recorded schizoid traits per patient, the one recurrence group .83, the several recurrences group .67, and the unrecovered group 1.0. Yet the recovered patients impress one as having quite definitely better personalities from the standpoint of being outgoing and adequate in meeting life. It is seen that the unrecovered group presents a much higher incidence of personalities which impressed the author as being on the whole introverted or shut-in. It is also seen that the recovered and one recurrence groups show a greater preponderance of good "bite on life". This means that the individual perhaps in spite of a basically shut-in personality, goes out to meet life's problems at least half way, participates actively and refuses to passively accept his lot. It is certain that the schizoid traits, particularly seclusiveness and lack of "bite on life" tended to be much more severe and disabling in the unrecovered cases with their high incidence of introversion than in the recovered group. At any rate, it is likely that the favorable outcome in the recovered group, even with its preponderance of schizoid traits, was in some
measure determined by the interest this group as a whole displayed in life and its opportunities. Perhaps this mixture of traits approximates what one might call normal.

They conclude:

1. The recovered group was particularly characterized by a worse heredity than the unrecovered, more specific schizoid traits in the pre-psychotic personality, but a better total personality adjustment, relief of the precipitating situation in the majority of cases, a manic or mixed type of reaction, adequacy and appropriateness of the affect, and confusion in the majority.

2. The unrecovered group was particularly characterized by a predominantly introverted unsuccessful pre-psychotic personality, lack of any relief from the precipitative situation, a depressive reaction in the majority, an affect that was inadequate and inappropriate in over half and a clear sensorium in the majority.
PERSONALITY AND PROPHYLACTIC THERAPY

Prevention of personality disorders has received great attention in the last 20 years. A. Meyer coined for it the term "mental hygiene." Mental hygiene belongs to psychiatry and every psychiatrist must know its fundamental principles. (10)

From an analysis of the personality of an individual we may with much certainty estimate the degree to which unfortunate psychotic reactions may remain fixed; we are enabled to judge with an accuracy otherwise impossible what likelihood there is that healthful or corrective reaction tendencies will assert themselves and with what final effect. In other words a study of the personality reveals the resources the patient may be expected or led to employ in the process of his treatment, and it enables the physician to map out a treatment or retraining program with precision. (1)

Bleuler in regard to early treatment of mental diseases in general believes that a purposeful bringing up might prevent many a neurosis. We see at least nervousness and morbid characteristics grow directly from an inadequate training and must therefore conclude that proper influences with training of the will and particularly of the character to become habituated to tolerate the disagreeable including pain, and hardened within sensi-
ble limits. All that could preserve from sickness many who are not too severely burdened. A careful selection of vocation will also furnish a certain protection. It is also conceivable that the timely solution of inner conflicts in the milder schizophrenic process could postpone the breaking out of secondary symptoms, i.e. of the manifest insanity.

**Juvenile Schedule**

In many cases neither the patient, relatives, nor the family doctor recognize that there is very much wrong. If anything is to be accomplished in dealing with mental disorders of this type, attention must be diverted directly toward habit formation and character training. Physicians especially, but also the parents and the teacher, should be much more familiar with the types of individuals likely to develop this type of mental disorder. All strangeness and bizarre conduct, tantrums and difficulties of child life should be more closely scrutinized. From this point of view we have a method of approach that is practical and offers great possibilities. Under institutional care there are many that readapt themselves. Occupational therapy such as handicraft or outdoor work, or an association of these are of great assistance.
Gosline (13) states that treatment for the child consists chiefly in education and re-education. The child should be assisted in finding a special way of adjustment to milieu and life.

All child guidance experts stress the importance of the child's reactions to play, companions and school as diagnostically and therapeutically important. The task of the future is the recognition of the importance of infancy and early childhood. The earlier the treatment the better the outlook for a permanent influence. The treatment of the prepsychotic personality in the final analysis means prevention of faulty emotional evolution and prophylaxis of unsound character traits. The shy, seclusive type of individual must be given opportunity and encouragement towards social-mindedness in order to modify his introversion into acceptable and sounder reaction patterns.

Hamilton (14) states that continued parental discord creates an atmosphere in which the children's mental difficulties flourish; consequently effort must be made to rear children in normal homes, preferably their own if treatment of unco genial parents can be made effective so that the child's development be not stifled. The schooling of peculiar children should be carefully scanned and means found to check the tendency to study
abstruse and obscure subjects. Rather should socializing subjects be emphasized, that youth may keep close to facts and maintain friendly personal contacts. Primacy in competition of intellects is a goal to be disparaged.

The sex life holds many difficulties for anyone with a schizophrenic tendency, therefore effort should be made to prevent fantasy by supplying competent knowledge of sex hygiene, and to discourage rumination by always discussing such matters without emotion and with only a modicum of moralization.

**Adolescent Schedule**

The patient's interests should be extended into the environment. For young adolescents this refers to the encouragement of active, preferably competitive, sporting activities, with the idea of promoting a wholesome exchange of emotions to and from the patient. It is often desirable to have the patient join a social organization such as a boy's club or the YMCA or its equivalent. School clubs often provide a favorable entry into group activities. The patient should not be goaded into social contacts, but should be allowed to make gentle progress. An important fact to keep in mind is the consideration that these individuals by so doing are entering upon a field that is new and strange to them. There-
fore, it is not a problem of re-education but rather one of making a fresh start. They must be educated to the simplest social requirements. It is generally conceded that it takes a few years for the young man with a substantial character background to gain easy environmental contacts; if that period is allowed for the average individual, one should certainly not expect a more rapid rise among those who have not had as good a beginning

(35)

Marriage should not be urged on a shy person. It often is urged and often results badly, for the vulnerable individual is wrenched from the protection of a home in which he is happy and is required to adjust himself to an emotional life for which his equipment is inadequate. We may but seldom feel justified in combatting strongly the desire to mate, but we have every reason for advising that the married state should not be urged on those whose instinctive drives are but feebly heterosexual.

The choice and any change of occupation should be given consideration by those interested, in order to prevent the development of illness; and any inclination to choose a vocation that merely promises compensation for ill-recognized inferiority feelings should be skillfully handled. The vocation selected should be certainly within the capacity of the individual and of a type to maintain his social life on as broad a scale as may be within his power.
Adult Schedule

Mental hygiene has dealt primarily with the formative stage of personality development, i.e., with children and adolescents. This attitude is incomplete. The mature adult also has need for a better physical and mental hygiene and much constructive work can be done in this field.

Mack(1) believes that a large percentage of failure and maladjustment among so-called normal people is due to incompatibility between type of personality and type of environment. Introversion and extroversion, psychiatrically speaking are not symptoms per se but are manifestations of basic personality types which characterize everyone. No one can ever actually lose sight of his original endowment in the way of personality trends and suppressions and disguise of it leads only to trouble.

Even among normal individuals subjectivity is often frowned upon. The retiring quiet person who likes to work by himself and does not enter freely into group activities is often considered unsocial and boorish. Actually the subjective makeup is an important factor in much of the really creative work of the world: The artist, the poet, the research-chemist, and the inventor probably make their great contributions to society through
their subjective approach to life, for artists, poets, research-chemists and inventors are, as groups, subjective in personality, according to the measurement made by the Human Engineering Laboratory. We need to learn even in the everyday world to respect more highly the subjective makeup and to cease feeling that there is something inadequate about it.

Finally as the basis of all this in our treatment of psychiatric cases, would it not be interesting and perhaps profitable to redirect the approach to the personality problem - looking upon personality trends not as symptoms to be overcome, but as clues to be followed? If a patient appears seclusive and unsociable, might it not be the best treatment of all to let him have a release from any pressure against that subjectivity - in other words, let him work by himself, let him have a project which will not require the effort of contacts with others, let him, maybe for the first time in his life, express his innate personality makeup in warp constructively adapted to it. Is it not possible that one reason for his need of therapy is the fact that he has never before been offered an opportunity to recognize frankly his subjectivity?

Or, if we have a restless, distractable patient, noisy and over-active, why not try giving him full outlet
for his energies and interests, give him a job which will require varied contacts with a number of patients and will keep him "on the go", allowing him to bustle about energetically to his heart's content? It might be that in his home, school or office he had never been free to use his objective forces and this may be a contributing factor in his present mental case.

Since so-called normal people have received great help from learning to coordinate their personality trends with their occupational environment, it seems reasonable that the same principle might work wonders with mental patients, who, many of them, may be mental cases only because they did not have this help in time. (29)
SUMMARY AND CONCLUSIONS

1. Personality is to be regarded as the end result of the reaction between the individual and the environment.

2. There is a basic personality makeup in Schizophrenic patients.

3. Schizophrenia is a disorder of the total personality viewed as a reaction type - a maladjustment - the result of repeated failures of the individual to adapt to the environment.

4. The basic underlying personality fact in Schizophrenia is a functional inadequacy, which is a mendelian recessive character.

5. About a third of schizoid personalities are characterized by certain traits, which aggravate the schizophrenic diathesis and are mendelian dominant characters.

6. In a high percentage of cases the schizoid personality is associated with a definite habitus.

7. The etiology of Schizophrenia is now believed to be based on the established personality type which, depending on its malignancy, results in the psychosis inevitably, or only in the presence of varying degrees of environmental stresses and strains.
8. The diagnosis of Schizophrenia is based largely on the cross section and longi-section study of the patient's personality makeup.

9. The presence of certain schizoid traits in the personality tend to favor a good prognosis.

10. A recognition and understanding of the Schizophrenic phenotype or personality makeup results in early recognition of potential psychotics, which, when followed with proper prophylactic therapy, will tend to decrease the incidence of Schizophrenia.

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BIBLIOGRAPHY

1. Amsden
Practical Value of the Study of The Personality In Mental Disorder
Am. J. of Psychiat. 2: 501-513, April, 1923

2. Anderson, H. H.
Conflicts in Personality Development
Ment. Hyg. 20:605-613, October, 1936

3. Barrett, A. M.
Heredity Relations in Schizophrenia (Chapt. V,p. 75)
Schizophrenia - An Investigation of the Most Recent Advances compiled by Association For Research in Nervous & Mental Disease New York, Paul B. Hoeber, Inc., 1928

4. Bleuler, E.
Text-book of Psychiatry (Trans. by H.A.Brill)
New York, Macmillan & Co., 1924

5. Bond, E. D.
Personality and Outcome in 200 Consecutive Cases
Am. J. Insan. 69: 731-738, April, 1913

6. Campbell, C. M.
Schizophrenic Type of Reaction (p. 24)
Schizophrenia - An Investigation of the Most Recent Advances compiled by Association For Research in Nervous & Mental Disease New York, Paul B. Hoeber, Inc., 1928

7. Campbell, C. Maclie

8. Clegg
Association of Physique with Mental Condition
J. Mental Sci. 81: 297-316, April, 1935

9. Davidson, G.M.
Nature of Schizophrenia
M. Rec. 140: 660-662, December 19, 1934
10. Diathelm, Oskar
Nonorganization and Disorganization of Personality
During Psychosis
Arch. Neurol. & Psychiat. 29: 1289, June, 1933

11. Diathelm, Oskar
Treatment in Psychiatry
New York, Macmillan Co., 1936

12. Gardner, W. E.
Psychopathic Personalities
Kentucky M. J. 29:411, August, 1931

13. Gosline, A. J.
Treatment of Pre-psychotic Personality of
Schizoid Types
Psychiatric Quart. 10:454-463, July, 1936

14. Hamilton, S. W.
Treatment of Schizophrenia, (p. 435)
Schizophrenia - An Investigation of the Most
Recent Advances compiled by Association For
Research in Nervous & Mental Disease
New York, Paul B. Hoeber, Inc., 1928

15. Harrowes, W. M.
Personality & Psychosis: Study in Schizophrenia
J. Neurol & Psychopath, 10:14-20, July 1929

16. Hook & Amsden cited in
Henderson & Gillespie, Textbook for Students
& Practitioners (3d Edition)
London, Oxford University Press, 1932

17. Hoch, A.
Study of Mental Makeup in the Functional Psychoses
J. Nerv. & Ment. Dis. 36:230, April, 1909

18. Hoch,
Personality and Psychosis
Am. J. Insanity 69:887, 1913

19. Hunt & Appel
Prognosis in Psychoses Lying Midway Between
Schizophrenia and Manic-depressive Psychosis
Am. J. Psychiat. 93:313-339, September, 1936

Psychogenic Precipitating Causes of Schizophrenia (p. 159)
Schizophrenia - An Investigation of the Most
Recent Advances compiled by Association For
Research in Nervous & Mental Disease
New York, Paul B. Hoeber, Inc., 1928
Role of Personality in Determining Type of Functional Disorder,
Penn. M. J. 34:294, February, 1931

22. Kahn, E. and Cohen, L. H.
Potentiality for Change in Personality
Am. J. Psychiat. 12:523-529, November, 1932

23. Kasanin, J. & Rosen, Z. A.
Clinical Variables in Schizoid Personalities
Arch. Neurol. & Psychiat. 30:538-566, Sept., 1933

24. Katzburg, L. W.
Schizophrenia
Minn. Med. 20:177-179, March, 1937

25. Kraepelin - cited by Petry H. K.
Role of Personality in Determining Type of Functional Disorder
Penn. M. J. 34:294, February, 1931

Schizophrenia - An Investigation of the Most Recent Advances compiled by Association for Research in Nervous & Mental Disease
New York, Paul B. Hoeber, Inc., 1928

27. Laurence, B. G.
Difficulties in Differential Diagnosis of Manic-depressive Psychoses and Schizophrenia
Del. State M. J. 8:108-110, June, 1936

28. Lewis, N. D. C.
Comments on Differential Diagnosis of Psychoneurosis and Psychosis

29. Mack, G. D.
Personality - Symptom or Clue?
Occup. Therapy, 15:261-264, August, 1936

30. May, James V.
The Schizophrenic Problem
Am. J. Psychiat. 11, #3, 401-447, November, 1931

31. Meyer, A. - quoted in Strecker & Ebaugh
Clinical Psychiatry,
32. Miles, W. R.  
Material of Human Nature & Conduct as  
Dealt with by the Psychologist  

33. Morrow, J. K.  
Research in Schizophrenia During 1936  
Del. State M. J. 9:76, April, 1937

34. Muncie, W.  
Rigid Personality as Factor in Psychosis  
Arch. Neurol. & Psychiat. 26:359-370, August, 1931

35. Nelson's Loose Leaf Medicine  
Dementia Praecox  
Thomas Nelson & Sons 7:706-707j, 1920

36. Niles, W. L.  
Glenard's Disease in  
Cecil, R. L. Textbook of Medicine, p. 768  

37. Page, J., Landis, C., and Katz, S. E.  
Schizophrenic traits in the Functional Psychoses  
and in Normal Individuals  

38. Petry, H. K.  
Role of Personality in Determining Type of  
Functional Disorder  
Penn. M. J. 34:294, February, 1931

Heredity and Environmental Factors in Causation  
of Schizophrenia  
Psychiat. Quart. 7:450, April, 1933

40. Pollock, H. M.  
Mental Diseases in the United States  
State Hospital Bull., May, 1925 - quoted by  
Henderson & Gillespie  
Textbook for Students & Practitioners, 3d Edition,  
London, Oxford University Press, 1932

Constitutional Factors in Schizophrenia  
Schizophrenia - An Investigation of the Most  
Recent Advances compiled by Association For  
Research in Nervous & Mental Disease  
New York, Paul B. Hoeber, Inc., 1928

42. Strecker & Ebaugh  
Clinical Psychiatry  
43. Strecker, E. A.
Chapter on Prognosis in Schizophrenia (p. 424)
Schizophrenia - An Investigation of the Most
Recent Advances compiled by Association for
Research in Nervous & Mental Disease
New York, Paul B. Hoeber, Inc., 1928

44. Strecker, E. A.
Precipitating Situations in Mental Disease
Am. J. Psychiat. 1:535, April, 1922

45. Sullivan, H. S.
Environmental Factors in Schizophrenia

46. Sullivan, H. S.
Research in Schizophrenia
Am. J. Psychiat. 9:553-567, November, 1929

47. White, W. A.
Personality, Psychogenesis & Psychosis
J. Nerv. & Mental Dis. 83:645-660, June, 1936

48. Wile, I. S.
Health in Relation to Personality

49. Willis - cited by Goldthwaite Christopher
Christopher, F. - Textbook of Surgery p. 397
Philadelphia, W. B. Saunders Co., 1936

50. Zimbler, M.
Dementia Praecox, Family Tendency
Del. State M. J. 9:83, April, 1937