
SCHIZOPHRENIA

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SCHIZOPHRENIA

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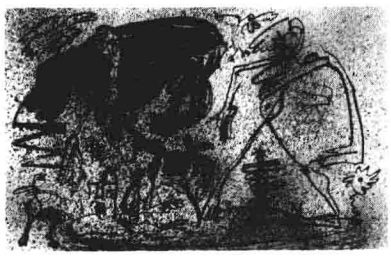

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Publisher's Letter

As recently as 1966, an article in *JAMA* noted that "Schizophrenia . . . splits psychiatrists into two cultures, the psychologic (psychodynamic) and the organic (somatic). Each group ignores the other and wishes it would go away."

I am not a psychiatrist. But from the vantage point of a journalist—albeit a parvenu to the journalism of psychiatry—I must say that either the dichotomy was more apparent than real . . . or things have been changing rapidly.

I say that because in preparing this learning system—a task that took our physician-editors throughout the United States and abroad—we all sensed that a large and growing area of common ground unites both practitioners and researchers.

And the unity is simply this: Tremendous advances in neurochemistry and psychopharmacology are casting a new light onto psychodynamics . . . even as better understanding of psychodynamics is permitting physicians to select more efficacious modes of therapy more rationally.

This unity among psychiatrists is in itself a dynamic force, the effect of which runs through the pages of this monograph; and to the extent that it reflects current thinking in the field of schizophrenia, all of us at MEDCOM are most indebted to our guest editors, Drs. Leo Hollister and Jonathan Cole for their generous assistance.

Finally, our thanks to the J. B. Roerig Division of Pfizer Inc. for making this project in continuing medical education available to physicians throughout the world.

Richard C. Fuisz, MD

Publisher

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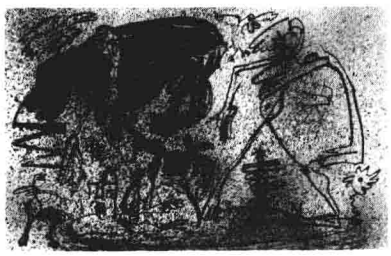

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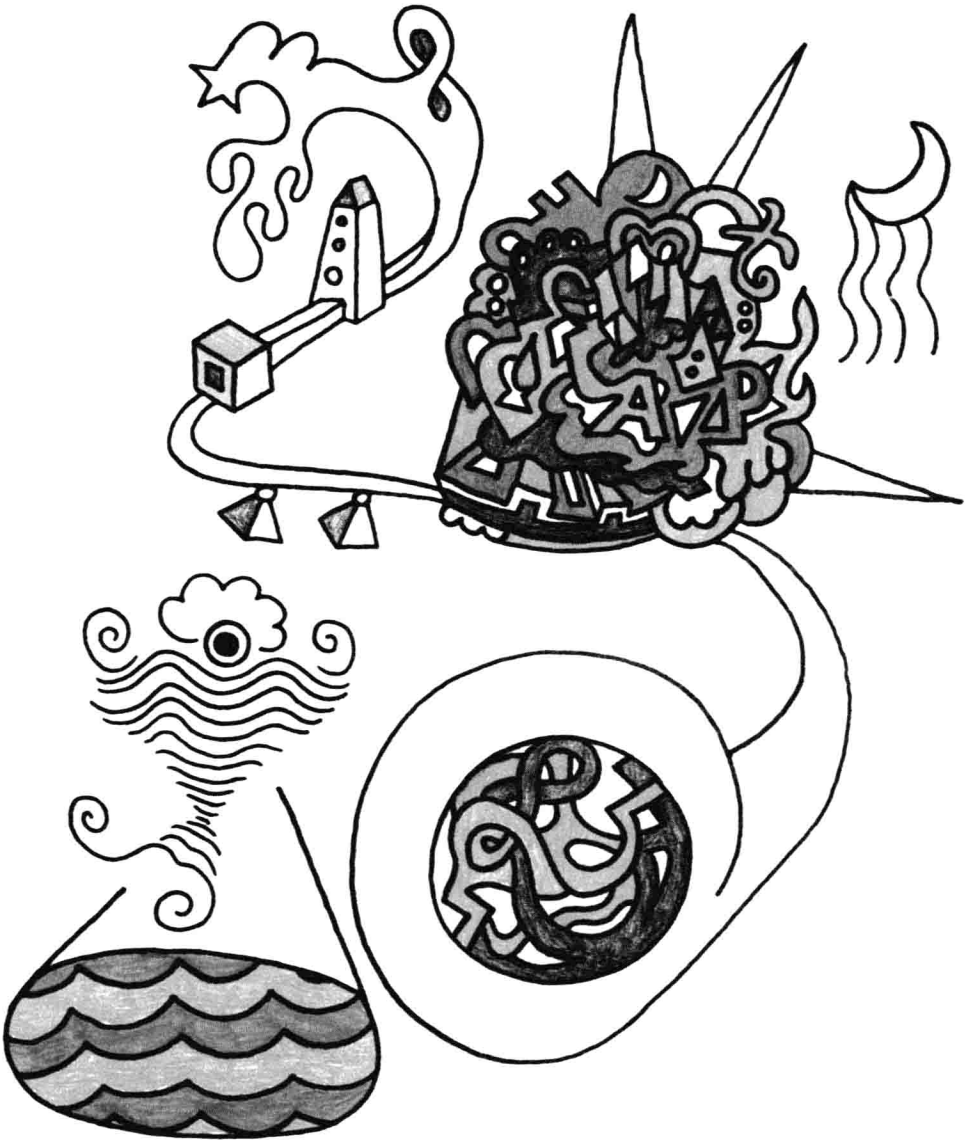

Chapter 1

SCHIZOPHRENIA: A DIAGNOSTIC OVERVIEW

What is schizophrenia?

And is it common?

Is there a typical course?

And what are the reliable diagnostic methods?

And more... by Robert Spitzer and Jean Endicott

Jean Endicott

Robert L. Spitzer

Osler once remarked that to know syphilis is to know medicine; so it can be said that to know all the varieties of schizophrenic disturbance is to know psychiatry.

Despite the lack of a generally accepted definition of the concept, it is agreed that schizophrenia refers to a serious psychiatric disorder of major public health importance. It tends to be chronic and usually leads to considerable disability. Moreover, it usually involves disturbances in one or more basic physiological functions which are essential to comfortable and efficient adaptation.

What Is Schizophrenia?

The ability to correctly perceive the self and the external world may be impaired by "sensory perception" in the absence of external stimuli (hallucinations) or by idiosyncratic false beliefs (delusions). Thinking is often disorganized and illogical. Emotional responses to people and events are usually inadequate or inappropriate. Relationships with other people tend to be either nonexistent, shallow, or idiosyncratic.

There is nearly always disturbance in some aspect of self-initiated goal-directed activity. It may take the form of inadequate interest or drive, poor judgment in formulating a practical plan, or inability to successfully complete a course of action.

Onset and Course of Illness

Although the onset and course of the illness are extremely variable, usually some difficulties are seen in childhood or adolescence. Excessive daydreaming, no close friends, and poor academic performance often characterize these patients. In addition, a change in personality may be noted by friends and relatives. Secondly, the onset of overt symptomatology typically occurs in adolescence or early adult life. This is useful in distinguishing schizophrenia from depressive illnesses and from many chronic brain syndromes, which often have their onset in middle or late life.

Three typical courses. The first of the three typical courses is characterized by an insidious onset and progressive deterioration without acute exacerbations; the second has an insidious onset and a chronic course broken by exacerbations; and the third has an acute onset followed by recurrent episodes with increasing residual impairment between the episodes.

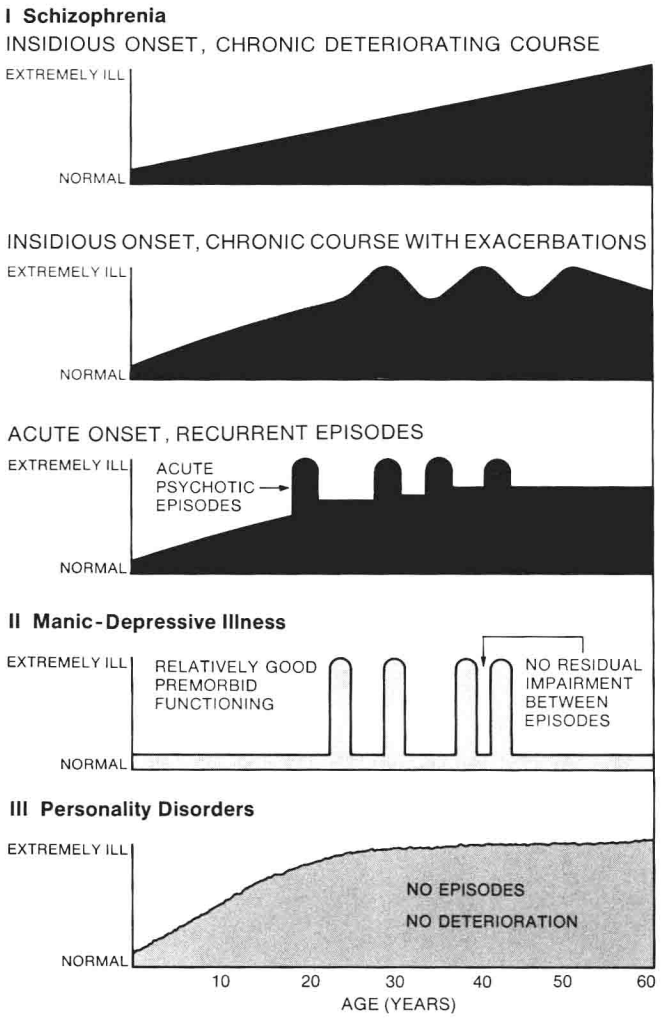

Fig 1 *The typical courses of illness in schizophrenia contrast sharply with each other and with other disorders.*

In each of the typical patterns there is no return to completely normal functioning; this is consistent with Bleuler's view that the process can stop or retrogress but never disappear. However, there are patients who — following an acute psychotic episode indistinguishable from a typical schizophrenic episode — appear to recover without any residual symptomatology. It is unclear how many patients fall into this pattern and whether or not such patients should be considered schizophrenic.

The first cases identified as schizophrenic were all functioning at a psychotic level; they exhibited severe personality disorganization and impaired capacity to recognize reality. For this reason, schizophrenia is

regarded as one of the "psychoses" and is listed in the psychiatric nomenclature next to the other psychoses — psychoses associated with organic brain syndromes, major affective disorders, paranoid states, and psychotic depressive reaction. However, it is now well recognized that many patients for whom the diagnosis of schizophrenia is justified are not always in fact *functioning* at a psychotic level. This is particularly true in the early or convalescent stages of the illness.

It should be noted that "psychotic" describes a level of functioning of a patient in which there is personality disorganization and impaired capacity to recognize reality, and "psychosis" is a term applied to a condition, such as schizophrenia or manic-depressive illness, which typically is associated with a psychotic level of functioning at some period of the illness. Thus a patient may have a psychosis but not be psychotic.

A Bit of History

Although some abnormal behavior described in ancient literature might now be labeled schizophrenia, scientific study of the disorder began in the 19th century. Morel, in 1865, described an adolescent boy who had been bright and active but became gloomy, silent, withdrawn, and apathetic. He expressed hatred for his father and thought of killing him. Morel termed this condition *démence précoce*. Kahlbaum, in 1868, described cases in which strange motor disturbances were prominent and called the condition *katatonia*. In 1870, Hecker described a condition characterized by silly regressive behavior, for which he coined the term *hebephrenia*.

Kraepelin. The genius of Emil Kraepelin lay in his recognition of the essential unity of these separate conditions. In 1887 he used the term *dementia praecox* to emphasize the deterioration of certain aspects of mental functioning and its usual onset in adolescence. The fundamental disturbance was in affect—an impoverishment of feelings and interests with no impairment of the ability to understand and remember. He identified three subtypes — paranoid, catatonic, and hebephrenic — that are still recognized today. Kraepelin contrasted this chronic and usually deteriorating condition with episodic disorders in which the primary disturbance was either a depressed or an elated mood, now referred to as major affective illnesses such as manic-depressive disorders.

The concept of schizophrenia has changed since Kraepelin.

Bleuler. In 1911 the Swiss psychiatrist Eugen Bleuler published his classic book, *Dementia Praecox or the Group of Schizophrenias*. He enlarged the concept described by Kraepelin to include milder cases which did not show any of the florid signs of the condition nor marked deterioration. For such cases he added a fourth subtype — simple.

Whereas Kraepelin emphasized the early onset, deteriorating course, and lack of affective responsiveness, Bleuler felt that the fundamental disturbance was "a splitting of the psychic functions," hence his term *schizophrenia*. He divided symptoms into primary and secondary categories. The primary symptoms "are present in every case and at every period of the illness, even though, as with every other disease symptom, they must have attained a certain degree of intensity before they can be recognized with any certainty."

The four As. According to Bleuler, four primary symptoms are characteristic of the disease and are found, as such, in no other condition: disturbances in association and affect, ambivalence, and autism.

Association. By association disturbance, now often called "schizophrenic thought disorder," Bleuler referred to the tendency of peripheral, marginal, or irrelevant features of a total concept to set off associations which interfere with logical goal-directed thinking. For example, a normal person could associate the name Mary with (1) Mother of Christ, (2) Mary Had a Little Lamb, or (3) Merry Christmas, but these associations would not interfere with his ability to think about a specific person whose name happened to be Mary. A schizophrenic's thoughts about a person named Mary might be a jumble of associations about these or other irrelevant features. As a result, thinking becomes confused, bizarre, incorrect, and abrupt. Mild thought disorder can make the speech vague or difficult to follow. In severe thought disorder the speech may be totally incomprehensible. Often there are sudden interruptions in the flow of thinking—called blocking—which the patient is at a loss to explain or may attempt to explain by a de-

lusion that his thoughts are being taken from him by some external force.

Affect, ambivalence, autism. By disturbance in affect, Bleuler meant both the lack of affective response and the presence of affect which is inconsistent with thought or action. By ambivalence, he was referring to the virtually simultaneous conscious occurrence of opposing thoughts, emotions, or impulses. Bleuler coined the term "autism" to refer to the tendency to withdraw from involvement with the external world and to become preoccupied with ideas and fantasies which are egocentric and illogical, and in which objective facts then tend to be obscured, distorted, or excluded.

The secondary symptoms are not necessarily present at any given moment in the illness, and may never appear. They are not unique to the illness and are seen in other conditions. However, when present they are easy to recognize and are therefore of great diagnostic use. They include such symptoms as delusions, illusions, and hallucinations, which often are the symptoms of immediate concern to either the patient, his family, or others.

The concept expanded. Some later workers have continued to expand the concept to include cases that neither Kraepelin nor Bleuler would have considered schizophrenic. For example, there is general agreement that there are patients whose clinical pictures include features associated both with manic-depressive illness and schizophrenia. Such patients are now classified as "schizophrenic, schizoaffective type." In addition, there are some clinicians who include cases that many would still classify as severe neuroses or personality disorders. Such patients are often referred to as "borderline schizophrenics" and are classified officially — along with other patients who have never displayed any secondary symptoms — as "latent type."

Psychiatrists in Europe tend to use the more restricted concept of schizophrenia associated with Kraepelin, while those in the United States are more strongly influenced by Bleuler and others, and apply the diagnosis more loosely.

MAKING THE DIAGNOSIS

Symptomatology

At the present time, the diagnosis of schizophrenia must be made on the basis of a clinical evaluation of the course and symptomatology. Although a single

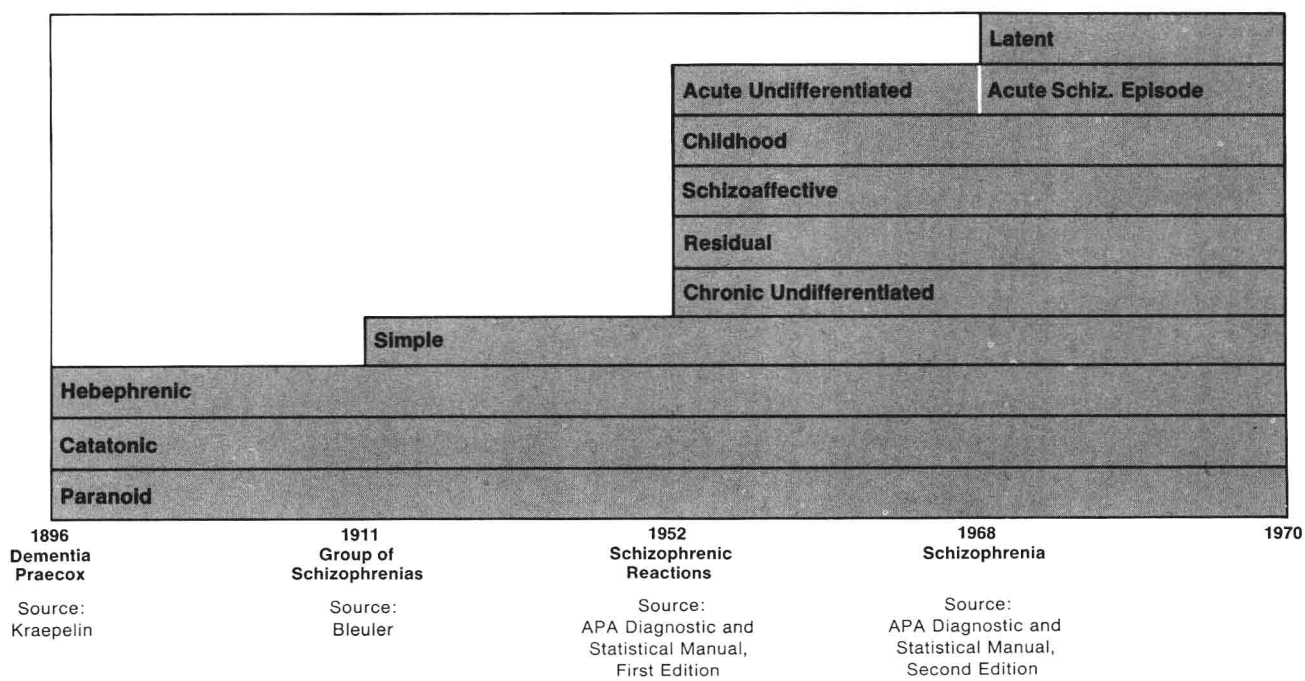

Fig 2 *Classification of Schizophrenia*

psychiatric examination may be sufficient, repeated examination or additional information from other informants is often necessary. Other conditions which can account for the clinical picture must be ruled out.

For example, both schizophrenia and alcoholism can produce auditory hallucinations. However, if the patient has had a chronic deteriorating course and has flatness of affect, this can be used to rule out the diagnosis of alcoholic hallucinosis. Similarly, both schizophrenia and involutional melancholia can produce delusions of bodily disease. If the patient functioned well up to the involutional period, the diagnosis of schizophrenia is highly unlikely. However, this should not lead the clinician to overlook the possibility of the patient's having schizophrenia and some concurrent psychiatric condition such as alcoholism, or even an acute or chronic brain syndrome.

Primary vs secondary. The attempt of Bleuler to specify some symptoms as primary, that is, present in all cases, was an important contribution to our understanding of the nature of the schizophrenic disturbance. But in fact their presence or absence cannot always be relied upon when making the diagnosis. First of all, there are some cases in which the presence of some practically pathognomonic secondary symptoms clearly establishes the diagnosis, yet Bleuler's primary symptoms cannot be clearly demonstrated.

The reverse is more difficult; mild forms of the so-called primary symptoms — such as losing one's train of thought, temporary blocking, and confused or illogical thinking — are commonly seen in nonschizophrenics, particularly when they are fatigued or anxious.

The secondary symptoms may never appear.

The diagnosis of schizophrenia is extremely likely when practically pathognomonic symptomatology is found. This includes some of the primary symptoms of Bleuler, such as flat affect and thought disorder, and a few specific symptoms, such as the delusion that everyone knows what the patient is thinking, which are seen only in schizophrenia. Unfortunately, the few symptoms in this category are rarely seen except in florid or chronic cases in which there is little difficulty in arriving at a diagnosis. They are of least value when they are most needed — in the early stages, where diagnosis is most difficult.

Some symptoms are very suggestive of schizophrenia, since they rarely occur in other conditions. Other symptoms are common in schizophrenia but are also seen in other psychoses — delusions of various kinds are common in organic brain syndromes and psychotic depressive illnesses. Symptoms such as phobias, obsessions, and compulsions are often seen in schizophrenia, but they may also be indicative of a neurotic disorder. Finally, there are some very common schizophrenic symptoms — such as anxiety or depression — which are of no diagnostic value, since they are common in many other conditions.

Psychological tests. Despite years of attempts to develop specific physiological tests that would aid in detecting schizophrenia, no such tests are yet available. The use of psychological tests, particularly to identify thought disorder, is of questionable value and should never be relied upon exclusively. During diagnostic interviews patients are often asked to explain the meaning of common proverbs, such as "a rolling stone gathers no moss." For many years it was assumed that the inability to give a reasonable generalization was suggestive of a schizophrenic thought disorder. More recent work has indicated that low intelligence, cultural background, and organic factors are very common reasons for incorrect responses, and thus proverbs have little, if any, diagnostic value.

The differential diagnosis between schizophrenia and acute or chronic use of hallucinogens is increasingly important. Such drugs as LSD or marijuana, or stimulants such as the amphetamines, often produce acute reactions that are symptomatically quite similar to an acute schizophrenic episode or chronic reactions that resemble chronic undifferentiated schizophrenia.

Subtypes

Schizophrenia is divided into various subtypes. The classic types of Kraepelin and Bleuler have been supplemented over the years by additional categories. The standard subdivision of schizophrenia decribed here leaves much to be desired. First of all, many patients do not obviously fit into any of the subtypes. Second, the clinical picture often changes

during an episode or from one episode to the next, so that the subtype is not very stable over time. Finally, the subtypes offer information of only limited value for management, treatment, and prognosis. Many other systems for subdividing schizophrenia have been proposed. These are designed to be useful for either prognosis or treatment; however, none has gained wide acceptance.

Assignment of a patient to a given subtype is based on presenting symptomatology, course, and the patient's age at onset of the disease. However, the relative importance of these three variables differs among the subtypes. Childhood type is based solely on age of onset. The classic subtypes—paranoid, catatonic, and hebephrenic—are based almost entirely on presenting symptomatology. The remaining subtypes involve both symptomatology and features associated with the course.

RELIABILITY OF DIAGNOSIS

In the absence of definitive criteria for making the diagnosis of schizophrenia, it is not surprising that

TABLE 1—DIAGNOSTIC VALUE OF DIFFERENT SYMPTOMATOLOGY IN SCHIZOPHRENIA

Symptom	Definition	Diagnostic Weight
A. Symptomatology practically pathognomonic of schizophrenia. When present, the diagnosis is extremely likely.		
Flat affect	Generalized impoverishment of emotional reactivity. Impassive face, monotonous voice.	Very common in schizophrenia. Distinguish from aphasic condition in severe depression which the patient regards as pathological, shallow affect of organics and hysterics, and constricted affect of obsessional personality.
Thought disorder	Tendency of the associations to lose their continuity so that thinking becomes confused, bizarre, incorrect, and abrupt.	Very common in schizophrenia. Most diagnostic when found in a setting of clear consciousness. Distinguish from looseness of associations as found in manic states, and from dull intelligence and poor education.
Delusions of influence or passivity	Delusional belief that thoughts, moods, or actions are controlled or mysteriously influenced by other people or by strange forces.	Unusual in schizophrenia but present in no other condition.
Hallucinations of thoughts being broadcast or spoken aloud		Unusual in schizophrenia but present in no other condition.
Delusion that everyone knows what the patient is thinking		Unusual in schizophrenia but present in no other condition.
Specific catatonic symptoms		
Rigidity	Maintenance of a rigid posture against efforts to be moved.	Occasionally seen in schizophrenia, particularly during acute catatonic episodes or in regressed patients who have been hospitalized for many years. Similar behavior is sometimes associated with organic brain disease.
Waxy flexibility	Maintenance of postures (eg, if arm is raised, patient will leave it elevated).	
Posturing	Voluntary assumption of inappropriate or bizarre postures.	
B. Symptomatology seen in schizophrenia and rarely in other conditions. When present the diagnosis is very likely.		
Apathy	Lack of feeling, interest, concern, or emotion.	Common in schizophrenia. Of diagnostic value only if not due to depressive syndrome.
Inappropriate affect	Affect which is incongruous in light of situation or content of thought.	Common in schizophrenia. Rule out manic, hysterical, or organic disorder.
Autism	Persistent tendency to withdraw from involvement with the external world and to become preoccupied with ideas and fantasies which are egocentric, illogical, and in which objective facts tend to be obscured, distorted, or excluded.	Common in schizophrenia. Rule out identification with a cultural subgroup which has deviant beliefs, as well as temporary withdrawal and preoccupation with fantasy life.
Catatonic stupor	Marked decrease in reactivity to environment and reduction of spontaneous movements and activity. Patient appears unaware of nature of surroundings, but generally is very aware.	Common in catatonic schizophrenics. Rule out organic brain disease, depressive disorder, or hysteria.
Neologisms	Invention of new words.	Unusual in schizophrenia but practically nonexistent in other conditions. Very suggestive of schizophrenia when accompanied by indifference to being understood.

the reliability — agreement among clinicians as to the presence of the condition in a given patient — is not as high as would be desired. Reliability is higher, of course, when the clinicians are well trained, have sufficient information, and are focusing their attention on diagnostic discriminations.

Clinician Concurrence: 75%

Reports of the reliability of the diagnosis of schizophrenia vary widely. On the average, if one psychiatrist diagnoses a patient as schizophrenic, the probability that another psychiatrist will concur is 75%. Although the reliability of the diagnosis of schizophrenia is far from satisfactory, it is in the range reported for the reliability of many other nonpsychiatric medical diagnoses based on clinical judgment rather than on specific tests.

Computer Programs

The use of computer programs to improve the reliability of psychiatric diagnosis has the advantage that, given the same description of the patient, a

Symptom	Definition	Diagnostic Weight
B. *(continued)*		
Catatonic excitement	Apparently purposeless and stereotyped excited motor activity not influenced by external stimuli.	Rule out manic or hysterical excitement, which is more purposeful and responsive to external stimuli.
Bodily hallucinations	False sensory impression experienced in the body. Example: Patient feels electricity is being sent through him.	Rare in schizophrenia. Very diagnostic when associated with persecutory delusions.
Auditory hallucinations	False sensory impression of sound.	Common in schizophrenia. Most diagnostic when voices. Unusual but present in affective psychoses and organic psychoses, particularly alcoholic hallucinosis.
C. Symptomatology commonly seen in schizophrenia and other conditions. When present the diagnosis is likely.		
Delusions	Conviction in some important personal belief which is almost certainly not true and is resistant to modification.	Rule out organic and other functional psychoses. In affective psychoses the content of the delusion is in harmony with the disordered mood. Bizarre, incomprehensible, or fragmentary delusions are more suggestive of schizophrenia.
Hallucinations	Sensory impression in the absence of external stimuli; occurs during the waking state.	Rule out organic and functional psychoses. When patient exhibits an inadequate emotional reaction, it suggests schizophrenia.
Inappropriate or bizarre behavior	Behavior that is odd, eccentric, or not in keeping with the situation.	Rule out organic and functional psychoses. The more incomprehensible the behavior, the more likely is schizophrenia.
Extreme social isolation	Avoidance of contact or involvement with people.	Also common in alcoholism, schizoid personality, and depressive illnesses.
Markedly unstable interpersonal relationships	Relationships with relatives, friends, and associates tend to be stormy and ambivalent. Minor difficulties lead to anger and disruption of the relationship.	Also common in hysterical and paranoid personalities. The more chaotic the history of relationships, the more suggestive of schizophrenia.
Ideas of reference	Detection of personal reference in seemingly insignificant remarks, objects, or events. May be of sufficient intensity to be a delusion. Example: Patient interprets a person's sneeze as a message.	Rule out other psychoses. Occasionally seen in suspicious people who are not otherwise psychotic.
Poor academic and occupational adjustment		Present in all other conditions. Is more suggestive of schizophrenia when variable over period of time and there is a marked discrepancy between level of functioning and background or previous achievements.
Excessive concern with body symptoms	Includes preoccupation with real or imagined physical appearance; fears of becoming ill; health rituals.	Rule out depressive illness and hypochondriacal neurosis. Bizarre or incomprehensible complaints or beliefs are suggestive of schizophrenia.

TABLE 2—MAJOR DIFFERENTIAL DIAGNOSES OF SCHIZOPHRENIA SUBTYPES

Schizophrenia Subtype	Differential Diagnosis
Paranoid	1. Involutional paranoid state 2. Paranoia 3. Amphetamine-toxic psychosis 4. Paranoid personality
Simple	1. Schizoid personality
Childhood	1. Behavior disorders of childhood and adolescence 2. Withdrawing reaction
Schizoaffective	1. Manic-depressive, manic 2. Psychotic depression 3. Cyclothymic personality
Latent	1. Severe neurosis 2. Severe personality disorder
Catatonic	1. Retarded depression
Chronic undifferentiated	1. Chronic organic brain syndrome 2. Chronic use of stimulants or hallucinogens
Acute schizophrenic episode	1. Severe transient situational disturbance 2. Acute organic brain syndrome

computer will always yield the same diagnosis. Some procedures have employed various probability models or other statistical techniques; others use a decision tree model similar to the differential diagnostic process used in medicine.

Decision tree. In the decision tree model, the computer program consists of a series of questions, each of which is either true or false. The result of each question rules out one or more diagnoses or groups of diagnoses and determines the next question to be asked. The questions are similar to those a clinician would ask, for example: "Is there evidence of an organic brain syndrome?" or "Is there evidence of a pathognomonic sign of schizophrenia?" Such programs have been very successful in simulating the clinical diagnostic process to the extent that agreement between the computer-derived diagnosis and clinical diagnosis is approximately the same as between the diagnoses of two clinicians.

The probability that two psychiatrists will concur on a diagnosis is 75%.

INCIDENCE AND PREVALENCE

In all countries where an effort has been made to

TABLE 3—PROGNOSTIC FEATURES IN SCHIZOPHRENIA

	Good Features	Poor Features
Premorbid factors	Good social, sexual, and occupational adjustment Cyclothymic personality Superior intelligence	Poor social, sexual, and occupational adjustment Schizoid personality Low intelligence
Onset	Late in life Acute Associated with environmental stress	Childhood or adolescence Insidious No apparent environmental stress
Presenting symptomatology	Preservation of affect Depressive or anxious mood Impaired consciousness, memory, orientation, if associated with an acute episode Catatonic symptoms	Flat affect Absence of anxiety or depression Bizarre or fragmentary delusions
Course	Episodic	Continuous
Psychopathology in parents	Manic-depressive	Schizophrenic
Subtype	Acute schizophrenic episode; Catatonic; Schizoaffective	Simple; Hebephrenic; Chronic undifferentiated