MANUAL FOR THE LEONHARD CLASSIFICATION OF ENDOGENOUS PSYCHOSES

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PREFACE

Despite the advances in psychiatric treatment over the past 25 years, there remain a significant proportion of chronic psychotic patients whose response to treatment has been less than satisfactory. They spent the greater part of their lives under almost continual psychiatric care which is, at best, a 'holding' action. Together with the psychogeriatric population, these chronic patients comprise the bulk of the institutional population in the United States. An initial step in the development of new and innovative treatment techniques requires a better understanding of the chronic process and, in particular, more precise methods of classifying the different patterns of psychopathology which are present within this group. Such an effort in classification has been made by Karl Leonhard, and it is this system upon which the manual is focussed.

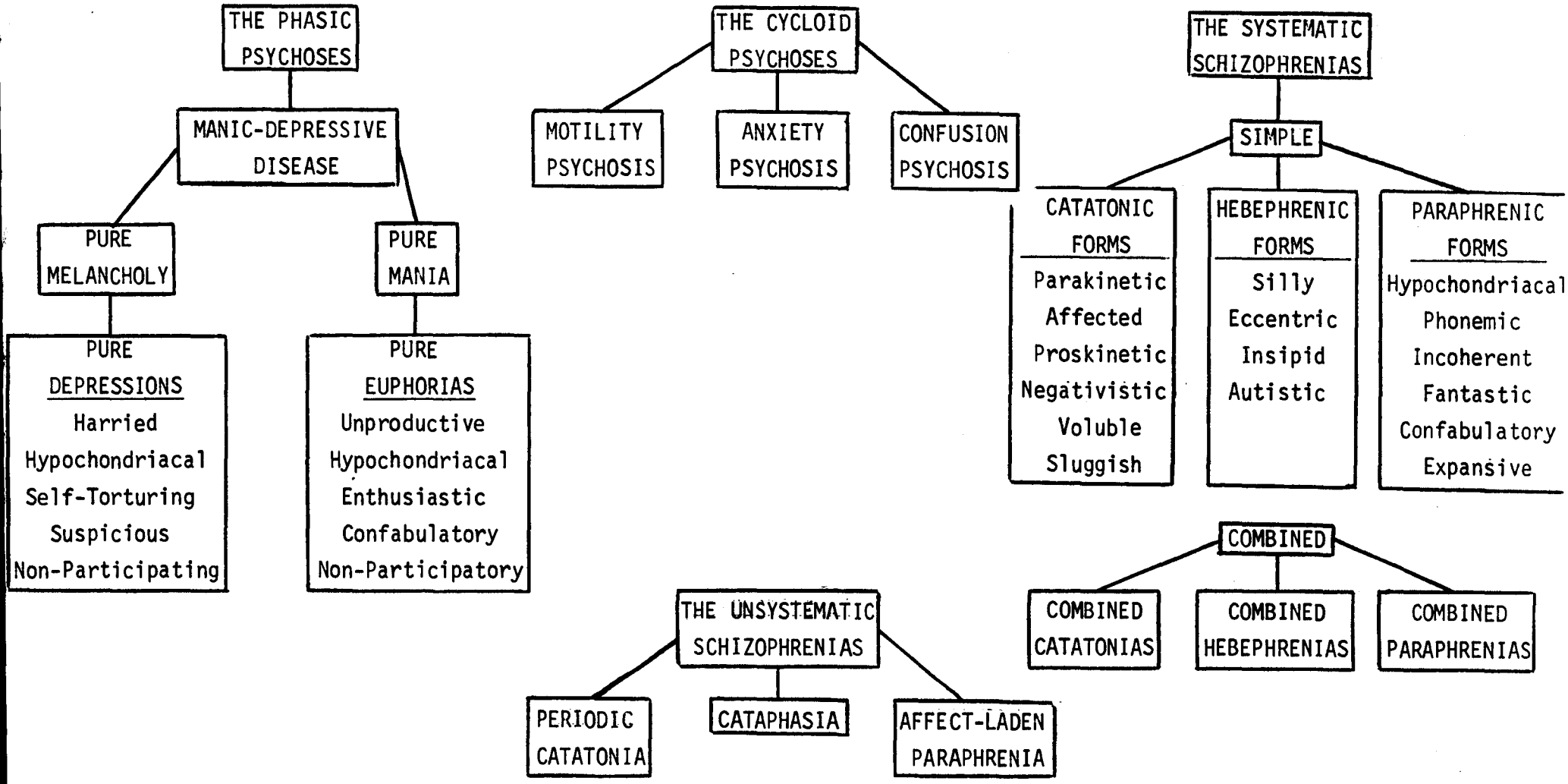
The manual consists primarily of synoptic descriptions to aid in the classification of psychiatric patients according to the Leonhard's system. The material has been assembled from the following sources:

1. Leonhard, K., The Classification of Endogenous Psychoses, ed. by Robins, E., Irvington Press, N.Y., 1979. (English translation of Aufteilung der endogenen Psychosen, 5th edition).
2. Fish, F., A Guide to the Leonhard Classification of Chronic Schizophrenia, Psychiat. Quart., 38: 438-450, 1964.
3. Fish, F., Schizophrenia, ed. by Hamilton, M., John Wright and Sons, Bristol, 1976.
4. Astrup, C., The Chronic Schizophrenias, Universitetforlaget, Oslo, 1979.

The translation of Leonhard's book is a rather literal one; as a consequence, Leonhard's statements tend to be somewhat stilted in English--retaining a noticable Germanic flavor. Rather than risk misinterpretation, the material has been presented verbatim.

The manual also contains a diagnostic rating scale, together with rating and scoring instructions for the Leonhard classification of chronic schizophrenias.

LEONHARD CLASSIFICATION OF ENDOGENOUS PSYCHOSES



I. THE PHASIC PSYCHOSES

A. MANIC-DEPRESSIVE DISEASE

Until very recently nearly all psychiatrists were united in the opinion that the manic and the depressive disease pictures were all part of the manic-depressive disease. It was the work of Angst and Perris that helped spread my theory that unipolar and bipolar diseases were separable. Previously, Kleist had claimed that there was no independent manic-depressive disease, but rather only a melancholy and a mania with a certain reciprocal affinity. Thus he had already claimed the independence of the unipolar forms, but had gone too far by totally denying the independent existence of the bipolar manic-depressive disease. The genetic difference between the unipolar and bipolar forms was seen in that the manic-depressive had a significantly higher rate of psychoses among relatives than did unipolar forms.

However, the two disease forms also have different clinical pictures. The bipolar form displays a considerably more colorful appearance; it varies not only between the two poles, but in each phase offers different pictures. The unipolar forms, of which there are several, repeat, in a periodic course, with the same symptomatology. Every individual form is characterized by a syndrome associated with no other form and not even related transitionally to any other forms. On the other hand, in bipolar cases no clear syndromes can be described since there are many transitions between various formations and the picture may even be distorted during one phase. Thus, one can generally recognize a bipolar form during the first phase. In the same sense, one is also in the position to recognize as bipolar those forms which only accidentally swing toward one pole but which contain the potential to-

ward the other pole. Consequently, the differentation is better made between polymorphic (bipolar) and pure (unipolar) forms.

With the essentially unipolar forms, there are no signs of lability toward the other poles; a unipolar melancholic never shows a manic trait--no matter how long it lasts or how often it returns--and a unipolar mania never has a trace of depression. One should expect reactive depressions only when a manic patient realizes after the end of the psychosis what he or she has done during the disease. But such depression can generally be differentiated from depressive oscillations of a manic-depressive disease by the presence of normal motivation.

Variations of the manic-depressive disease arise when the disease-events go beyond the normal margins and create symptoms otherwise associated with the cycloids (i.e., also a bipolar disease form). Best known of the manic-depression variations is the confused mania in which the thought disorder has a character otherwise associated with the confusion psychosis. There is not necessarily a consciousness disorder. In the hyperkinetic phenomena, there are traces of the motility psychosis and, in the ecstatic phenomena, there are traces of the happiness psychosis in the otherwise manic picture. In the stuporous depression, the inhibition takes on the aspect of mutism, in the confusion and motility psychoses, a kind of akinesis. Severe anxiety corresponds to the affective disorder of the anxiety psychosis. It is questionable if the consciousness is involved in the manic-depressive disease, as it often is in the cycloid psychoses.

I have prescaled the symptomatology of the manic-depressive disease and the range of the symptoms. It can be essentially grasped if one begins with the manic and the melancholic basic syndrome, and understands atypical forms to be mixed states, partial states, which occasionally mimic pure euphorias and depressions, or an extension of the

symptomatology into that of the other bipolar forms. Certain similarities to the cycloid psychosis can be understood as an increase in degree of severity--thus confused manic and stuporous depressive pictures. Mixed states, severity increases, and traits of the anxiety-happiness psychosis, confusion psychosis, and motility psychosis thus make up the atypicalities.

I have no new results on the length of the separate phases which, for manias, is considered to be one quarter to one half a year, and, for melancholies, one half to three quarters of a year. My results also confirmed the fact that phases can exceptionally last only hours or that they can continue for years and, in fact, become chronic. I have ignored the normal temperaments associated with the manic-depressive disease, not because I saw no possibility of adding to what is known, but because special investigations were planned. It is clear that hypomanic, hypomelancholic, and cyclothymic temperaments are present in the families of the patients as kinds of dilutions of mania, melancholy, and the manic-depressive mixed state.

B. PURE MELANCHOLY AND PURE MANIA

The full import of the polymorphousness of the manic-depressive disease only becomes clear when the pure forms of the disease with their stable symptomatic pictures are discussed, particularly the pure melancholy and the pure mania. Some points have already been touched upon, since the variable syndromes of the manic-depressive disease occasionally mimic the pure forms.

The "basic syndromes", with which the discussion of the manic-depressive disease began, also represent the pictures of pure melancholy and pure mania. Thus, the functional area that is affected by those forms is also the center of activity for the manic-depressive disease.

1. Pure Melancholy

I have demonstrated the independence of pure melancholies from the manic-depressive disorder by the clinical descriptions and the family histories. It is a unipolar disease, which has no manic component either in the psychosis itself or in its temperamental peculiarities. The clinical delineation from the manic-depressive disease is not possible in every case, but the evidence from the family histories has shown misdiagnosis to be rare. The clinical picture is characterized by depression, psychomotor inhibition, thought inhibition, indecision, feelings of insufficiency, and varying depressive ideas, not particularly obtrusive in any one direction. The danger of suicide is great. Physical symptoms add to the psychic picture, as with the melancholies of the manic-depressive disease.

2. Pure Mania

Pure mania is characterized by euphoria, restless activity, a wealth of expressive motions, an urge to speak, flight of ideas, heightened self-importance, and rapidly changing ideas of grandeur. The excitation does not heighten into confusion or hyperkinesis. Thus, the pure manias appear milder than many manias of the manic-depressive disease. But they tend more than the manias of manic-depression towards a chronic course, at times in the form of hypomania. The accompanying bodily phenomena are similar to those of the manias of the manic-depressive disease, but the heightening of the state of bodily strength is more salient here, since overexertions of the excitations, which could cause bodily harm, are absent.

C. PURE DEPRESSIONS AND PURE EUPHORIAS

Pure melancholy and pure mania do not represent purely affective diseases; thought and desire are also disturbed. There are, however, also psychoses in which only the emotional side becomes diseased, although not in its totality, but only on a certain level. In any case, that is how I interpret the pure depressions and the pure euphorias. The diseased construction of ideas appears to be only determined by the diseased affect. The number of phasic forms of mental diseases is greatly increased by the pure depressions and pure euphorias. This may make the overview more difficult, but due to their pure forms, the pictures can be easily differentiated. They are also of great importance for the psychology of the normal emotional life. Practical experience creates the necessity of recognizing all these separate forms.

The pure depressions are common enough to be repeatedly observed. Once familiar with their pictures, one will seldom have difficulty making a correct diagnosis.

The pure euphorias are very rare diseases, as will be seen in the statistical presentation. Due to this rarity, it is not truly possible to produce a proof of independent disease forms, even though the picture is occasionally very impressive. They receive, however, a great deal of support from the pure depressions, since just as pure mania corresponds to pure melancholy, there is apparently a pure euphoria for each pure depression. The diseases are not bipolar like the manic-depressive disease, but one can call them antipolar, since each form corresponds to an opposite. Pure mania, too, due to its rarity, demanded a certain amount of support from its opposite, pure melancholy. The pictures of pure euphorias occasionally resemble the manic-depressive disease and the anxiety-happiness psychosis. However, in their total picture, they are less frequently mimicked by the polymorphic psychoses than are the pure depressions.

1. Harried Depression

Harried depression is characterized by a tortured-depressive state of anxious coloration, accompanied by continuous restlessness characterized by anxious harriedness. Anxious ideas generally occur, often with ideas of sin and hypochondriacal fears. In the onset, the restlessness and idea construction can vary, but if the suffering lasts a long time, both become uniform. Complaints then occur often stereotypically with the same content. In every case, restlessness displays a strong tendency to tenacity, which cannot be overcome. Nor do the patients let themselves be distracted from their complaints. It is even often impossible to receive answers to neutral questions. The inability to influence the harried depressions can create the false impression of obstinacy. As the anxiety recedes, the anxious lamenting often develops into drivenness, which often appears querulous, although an anxious-tortured undertone is recognizable. Harried depressions can quickly run their course, but may also be protracted. This is particularly true in milder forms in which the drivenness outweighs the lamenting and may stretch on for several years. One suspects that the patients also display traits of anxious restlessness in their temperaments, i.e., fully outside the psychosis. The pyknic constitution seems to be common; one should not be fooled by the loss of weight which often accompanies the anxious unrest.

2. Hypochondriacal Depression

Hypochondriacal depression is characterized by bodily misperceptions, the description of which shows them to be very peculiar. Frequently fears about the bodily well-being develop,

but only misperceptions are essential to the diagnosis. Alienation phenomena, generally hinted at and often marked are also present and affect normal body sensations, sense perception, and imagination. The alienation due to a lack of sympathy, as we will find in the non-participatory depression, is not present in the hypochondriacal depression. Other depressive contents are absent, or at most, only outlined. The patients generally complain a good deal about their alleged ailments, but without displaying actual excitation. The state can be extremely painful, but the total personality is less affected by the depression than in cases of melancholy or harried depression. Consequently, the suicidal tendency is low. Chronic courses are not infrequent. Occasionally the depressive-hypochondriacal state apparently never heals and nothing essential changes in the picture. In terms of physique, the hypochondriacal depressives are predominately pyknic, but I have not reached a precise conclusion.

3. Self-Tortured Depression

In the center of the self-tortured depression, we find diseased ideas, the contents of which include self-accusations, self-denigrations, and anxiety, directed at the patient himself and, even more, at the family. The diseased affect appears to continually redevelop in the ideas. The ideas often are extreme and the patient's claims become hyperbolic: he or she is the worst and most despicable person there had ever been and will be terribly punished. In a self-tortured manner they always return to these ideas and try to convince others of their correctness while becoming very excited. When, however, there is no external stimulus to express the ideas, the patient

behaves quietly and appears to be pensive, probably quietly involved with his ideas. There is no drivenness, as in the harried depressions. There is, on the other hand, no retardation. At any moment an excitation can develop out of the apathetic-quiet behavior, and the ideas will be expressed. In terms of physique, the leptosomic type is not quite as rare as in other depressive diseases.

4. Suspicious Depression

In the suspicious depression, ideas of reference with depressive contents combine with either a depressed or a more anxious mood. The patients deduce from the activities in their surroundings that they are considered inferior or sinful or that something bad is awaiting them. Besides the ideas of reference, voices occasionally repeat the depressive contents. Like other pure depressions, the suspicious depression too can assume a chronic course. As long as the connection between the depressive mood and the self-references with depressive contents continue, there is no reason to change the diagnosis. Due to short observation periods, confusions with reference syndromes of other origins can occur. The tendency to suicide appears to be relatively large in the suspicious depression. Distrustful temperaments are present among the relatives. These probably are peculiarities within the range of normal corresponding to the suspicious temperament. In terms of physique, I can only say that my impression has been that the leptosomic type was frequently seen.

5. Non-Participatory Depression

Non-participatory depression is characterized by a depression of mood, accompanied by an impoverishment of the

feelings and the will, which is essentially more subjectively felt than objectively recognizable. According to the patient, the higher mental emotions, not only joy but sorrow as well, lose their depth. Above all, the ability to sympathize with others is subjectively lost. In their tortured state, the patients can become very actively grievous, but in general an objective non-participation and loss of initiative appears. Other depressive symptoms play no role in the clinical picture; however, often psychologically related self-accusations, due to the non-participation, do appear. The depth of the depression is less than in the other pure forms; suicide attempts are less often. A chronic course also appears in the non-participatory depression which, however, does not change in the picture of the state. In terms of physique, I noticed nothing in particular. I have seen the non-participatory depression in both leptosomic and pyknic patients.

6. Unproductive Euphoria

Unproductive euphoria is characterized by a motiveless feeling of happiness which appears to arise in a more bodily level of feeling. Only a few ideas associated with the euphoria appear, and they have no great importance with the patient. Corresponding to their happy contentment, the patients show little compulsive activity. Occasionally they attempt to put their ideas of happiness into practice but, even then, display no stress.

7. Hypochondriacal Euphoria

In hypochondriacal euphoria, misperceptions of various kinds combine with an elevated mood. The patients complain in a lively manner about their problems and seem to suffer, but

their facial expression is one of a euphoric mood. When asked, they will confirm that they are in a euphoric mood hardly affected by their sensations. More than other pure forms, hypochondriacal euphorias tend toward a chronic course. The complaints then become somewhat querulous, but the euphoric mood remains present.

8. Enthusiastic Euphoria

In enthusiastic euphoria, the feeling of happiness is connected to ideas, the content of which is simultaneously a self-elevation and the happiness of others. The patients lose themselves in those ideas, often with an ecstatic degree of emotion, but when they are distracted from them, the affect sinks. Thus the euphoria need not be present as a continuous state. However, even when speaking about neutral topics, the patients maintain a festive elevation, reflecting the particular nature of the affect. They often claim that the ideas were suggested to them by higher powers and refer occasionally to pseudohallucinatory experiences.

9. Confabulatory Euphoria

Confabulatory euphoria is characterized by fantastic stories and an elevated mood. Occasionally the stories are based in errors of memory and occasionally they are fantastic notions. Their contents are of a joyous nature, often including self-elations, and often merely following a fantastic-sensational pattern. Misperceptions can play a role but it is usually hard to determine whether something was truly misperceived or only confabulated.

10. Non-Participatory Euphoria

Non-participatory euphoria is characterized by a subjectively felt and an objectively recognizable impoverishment of will and emotions combined with a euphoric mood.

III. THE UNSYSTEMATIC SCHIZOPHRENIAS

Leonhard - Systematic and unsystematic schizophrenias have essentially nothing to do with each other. The common name is justifiable only in terms of tradition because, since Kraepelin and Bleuler, all endogenous psychoses leading to defects have been grouped as schizophrenias. The deep parallels of the unsystematic schizophrenias are much closer to the cycloid psychoses than to the systematic schizophrenias. This relationship is emphasized by the fact that each of the curable forms (the cycloids) corresponds to an unsystematic schizophrenia. There are relationships between the anxiety-happiness psychosis and the affect-laden paraphrenia, between the motility psychosis and periodic catatonia, and between the confusion psychosis and schizophasia. The differential diagnosis is often difficult. On the other hand, one rarely has any trouble differentiating between a systematic and an unsystematic schizophrenia. Not only are the symptomatic pictures completely different, but the courses as well are fully different. The systematic forms display a creeping, progressive course, while the unsystematic forms may go into remission or may even be clearly periodic. A periodic catatonia can produce as many attacks as a manic-depressive disease. Bipolarity is also characteristic for the unsystematic schizophrenias.

Fish - The nonsystematic schizophrenias show a wide range of symptoms and may show symptoms belonging to another nonsystematic group. If there are doubts about the major group to which a given illness belongs, it is likely that it is nonsystematic. If the illness can be easily allotted to the hebephrenic group, however, it cannot be a nonsystematic illness, since there is no nonsystematic hebephrenia. In general, patients with nonsystematic schizophrenia have better pre-

served affect and less personality deterioration than the systematic schizophrenics. However, severe defect states may occur, particularly in the periodic catatonics.

A. PERIODIC CATATONIA

Leonhard - Periodic catatonia involves both hyperkinetic and akinetic states. These are, however, rarely present in pure forms. Rather, symptoms of one pole are mixed with those of the other pole. Thus, in the presence of akinetic traits, hyperkinesis displays a peculiar rigidity. The movements occur stiffly, natural grace disappears, and individual motions do not flow together harmoniously. The distortions of the motions disguise the meaning of the motions; reactive motions cannot always be recognized as such; expressive motions lose their content to a great extent; and gestures turn into indefinite reaching movements and facial expressions turn into grimaces. The distortion of natural activity gives the excitation of periodic catatonia a parakinetic aspect. One can recognize even more clearly, the influence of hyperkinesis or akinesis. Despite a general rigidity of posture and facial expression, senseless movement of an extremity can occur and the movement generally becomes uniform, either as a stereotype or iteratively. Stereotyped postures develop in this manner; despite the lack of motion, certain postures are repeatedly, actively assumed. Another form of the mixture of hyperkinetic traits in akinesis is the development of impulsive actions despite the akinesis. They are often associated with aggressiveness. A negativistic behavior also implies the mixture of a motor tendency in the akinesis. Furthermore, some patients, with little motivation, suddenly burst out with exaggerated laughter.

Remissions regularly follow the acute outbursts. Patients with hyperkinetic states have, in fact, a relatively good prognosis. After

several or even many attacks, only a relatively small defect remains. However, akinesis more often is followed by permanent defects. If the defects are only mild, they are characterized by a general psychomotor disturbance, although both thought and affect are affected. In more severe cases, one can speak of the numbness. One usually sees symptoms from both poles of the disease side-by-side, in the final state as well. Lack of motivation is accompanied by grimaces, impulsive actions, and sometimes by a linguistic impulsivity which can lead to avoidance. Aggressive excitations are particularly characteristic.

Periodic catatonia is related to the motility psychosis, but goes considerably deeper. Only in very mild cases can periodic catatonia be mistaken for motility psychosis. In mild cases, the clinical picture can also reveal relationship to other polymorphic phasic psychoses as well as to the other two unsystematic schizophrenias.

Fish - Periodic catatonia runs a shift-like course in which attacks of stupor and excitement occur. In the stuporous of akinetic shifts there are usually some hyperkinetic features, so that stereotypies also occur. In the hyperkinetic shifts, such akinetic features as facial rigidity and stiff jerky movements are seen. Sooner or later, there is an obvious defect state between the shifts. This may be mild or moderate, but is occasionally so severe that it is reminiscent of a chronic organic state. Phenothiazines tend to prevent further shifts and prevent any worsening of the residual defect state.

B. CATAPHASIA

Leonhard - Cataphasia appears in two forms, the excited and the inhibited. The excited cataphasia is characterized by a confused compulsive speech, in which linguistic expressions become incomprehensible in severe cases. The patients' behavior, however, remains generally

sensible and his activity and affectivity are well-preserved. The inhibited cataphasia is characterized by a mutism; in milder cases, by taciturnity. The thought disorder of cataphasia is recognizably related to the disorder in the confusion psychosis. In excitation, however, it goes will beyond a simple coherence, and in the inhibited form, well beyond a simple thought inhibition. In excited cataphasia, one finds severe logical blunders. To the extent that the patients still talk, similar results are found in the inhibited form. In complete mutism, the thought disorder cannot be immediately determined. However, in the facial expression of the mute patients, one recognizes not only the perplexity characteristic of the confusion psychosis, but also an internal emptiness and dullness. Furthermore, instead of answering, the patients tend to stare fixedly at the examiner. In excited cataphasia, one often finds confabulations, and in the inhibited form, ideas of meaning. In addition to the excited and inhibited cataphasia, there are cases which display the thought and speech disorder but which are neither talkative nor taciturn, i.e., they only display the central defect syndrome of the disease.

As in affect-laden paraphrenia, cataphasia often contains admixtures of other unsystematic schizophreniasor of cycloid psychoses and one often finds ecstatic fluctuations.

The course of cataphasia can be creeping-progressive. Even so, one often finds remissions which, in rare cases, lead to clinical recovery. More characteristic is a fluctuation between excitation and inhibition.

Fish - The essential feature of this disorder is the breakdown of speech and thought. In the excited form, there is marked pressure of speech with many grammatical faults and only a few neologisms. The patients are often well-behaved, and there is a strange contrast be-

tween their utterly muddled speech and their ability to work and behave rationally. Sometimes these patients have a somewhat haughty manner and address the examiner rather than speak to him. Phonemes and paranoid delusions may occur, but they do not dominate the picture. In the inhibited form, the patient is mute and all actions are slowed down, but the motor activity and the posture show no unnatural features or distortion. The facial mimicry is impoverished but not distorted. These patients are able to take care of personal needs unassisted. Catatonic symptoms can, of course, occur in cataphasia. This illness, especially the excited variety, responds very well to phenothiazines. Patients receiving these drugs usually show little pressure of speech or thought disorder in ordinary conversation. The disorder is fairly obvious if simple tests, such as the proverbs test, are administered.

C. AFFECT-LADEN PARAPHRENIA

Leonhard - Affect-laden paraphrenia displays affect fluctuations between anxiety and ecstasy, often during the onset of the disease and, not rarely, during the course of its later development. The affects are always associated with a diseased idea construction. The anxiety contains self-references and, frequently, hallucinations. The ecstasy is accompanied by false perceptions, particularly visions and ideas of happiness. At the onset, it is hard to differentiate between affect-laden paraphrenia and a benign anxiety-happiness psychosis, but, generally, it soon becomes recognizable that the illusions and sensory misperceptions can no longer be fully traced back to the anxiety and ecstasy. Rather, they have become illogical and incomprehensible. The bodily misperceptions, which the anxiety-happiness psychotics usually relate to their abnormal mental state, takes on the hallucinatory character of external influence in the

affect-laden paraphrenia. The affective fluctuations are flatter and are at times replaced by a mere irritability that grows out of the anxiety. In place of the anxious reference syndrome, one finds the irritated reference syndrome, which contains hostile reinterpretations of the environment. The affect-laden paraphrenia may stop its development in this stage. Similarly, mild ecstatic moods can become chronic states and produce a chronic happiness illusion. Finally, and more commonly, the affectivity in both directions can be involved, and ideas of persecution and happiness exist simultaneously. The illusion tends to be systematized, at times to a high degree, producing a picture of Kraepelin's paranoia.

Often the affect-laden paraphrenia does not stop in this stage, but continues forward in its development. The illogical component, present as a tendency fromthe start, becomes even more present in the construction of the delusion so that finally immense ideas of grandeur, errors of memory, misrecognitions, absurd ideas, and sensory misperceptions develop. These traits are rarely as equally developed as in the systematic forms of fantastic schizophrenias. Some may be absent, while others may dominate the foreground. Occasionally, one is reminded of a confabulatory paraphrenia. The key to the diagnosis is the behavior of the affect. While fantastic or confabulatory paraphrenics of the systematic group have no deep tie to their world of illusions, and consequently talk about it without an affective display, the affect-laden paraphrenia remains anchored in the affect. The patients speak of their ideas with deep irritation or with pride and enthusiasm. If the affect is not immediately obvious, then one need only stimulate them a bit to observe a heightening of affect. The paranoid affect is maintained in the illogical idea construction. However, independent of their illusions, the affect-laden paraphrenics may become numb, so

that one can hardly speak of a true preservation of the affect.

Mixed into the characteristic pictures of affect-laden paraphrenia, one often finds traits which point out a connection with the other unsystematic schizophrenias. Catatonic traits are common and clear catatonic pictures are, at times, found among the patients' relatives. Similarly, schizophasic traits are often found.

The course is not always merely progressive, but cases with remissions are more common and periodic courses do occur, in which case, the affectivity fluctuates between the two poles.

Fish - The essential feature of affect-laden paraphrenia is the affective loading of the delusions. Patients complain bitterly about being persecuted, or bring forward grandiose delusions with enthusiasm. Auditory and bodily hallucinations usually occur. Often the illness begins as a circumscribed paranoid psychosis but, with the passage of time, the delusions become more and more illogical. Grandiose delusions, misidentifications and hallucinations are present, so that the clinical picture resembles that of fantastic paraphrenia.

The affect-laden paraphrenic often shows mood changes of a depressive or euphoric kind. Severe thought disorder resembling schizophasia may occur, and transient catatonic signs may be observed. Not infrequently, the illness runs a shift-like course.

This illness responds very well to the phenothiazines. Delusions and hallucinations lose their torturing quality and the patient may be able to carry out responsible work. However, these drugs must be taken for the rest of the patient's life.

IV. THE SIMPLE SYSTEMATIC SCHIZOPHRENIAS

Leonhard - The sharpness of their symptomatology differentiates the systematic schizophrenias fromthe unsystematic forms. Whereas in periodic catatonia, cataphasia, and affect-laden paraphrenia one must always point out the symptomatological polymorphism. Precluding strict delineation, we find sharply circumscribed pictures in the systematic forms. This parallels what we have observed in the phasic psychoses where there were pure forms with symptomatology alongside the polymorphic forms. Probably the parallel exists because both the pure phasic forms and the systematic schizophrenias attack specific functional areas, the limits of which produce the sharp borders of the psychoses. One should not assume any further relationship because, in the phasic psychoses, it is a question of curable changes while in the systematic schizophrenias, it is a matter of distinct defects. The functional areas affected by the two sets of diseases are of very different natures. Pure depressions, euphorias, and manic-depression disease are diseases of the thymopsyche region which is close to the vegetative nerve area. The schizophrenias clearly affect higher thought and will processes. Even the affective flattening hebephrenias do not suggest a disorder of the thymopsyche. Rather, it is a higher level of affectivity that is changed, while the more bodily types of feelings and instinctual processes are maintained. The schizophrenias attack the highest, but phylogenetically youngest human functions of the psyche. The absence of these functions, as seen in the systematic schizophrenias, gives us important insights into the normal functionings of these psychic forces.

Because the higher human psyche is extraordinarily differentiated, one assumes that, in the systematic schizophrenias, a large number of

functional units are involved. When it is shown that defect diseases, like the schizophrenias, can lead to diseases of individual functions, one must recognize the resemblance of the neurological system, which comprises functional units. This is even more likely since the entire nervous system is made up of "systems", i.e., groupings of cells with related nerves.

Thus I believe, as Kleist always assumed, that schizophrenias are based in system diseases. However, while Kleist applied this assumption to all schizophrenias, I restrict it to the systematic schizophrenias. The unsystematic forms, or the "atypical" forms, as I once called them, must be considered separately. Individual functional areas are generally electively affected by the unsystematic forms of schizophrenia, but the cause of the disease lies outside the functional area and can, therefore, affect other areas. In systematic schizophrenias, the disease process is primarily found within the affected system.

The systematic-schizophrenic pictures, which differ sharply from one another, are found in the end-state of the disease. In early stages, accessory symptoms associated with the transitional phase are mixed in. Anxious or euphoric moods, self-references, and sensory illusions can characterize the onset of every form of schizophrenia and are the manifestation of an unspecific effect of the process. It is not a question of a simultaneous disease of other systems; it is rather a general, temporary alternation. Psychologically comprehensible reactions to the subjectively experienced onset of the disease also play a role, hence, the origin of catastrophe-experiences. Often, however, the defect syndrome is in the foreground from onset, and although it may be minor, it does permit a precise diagnosis. Occasionally, as Faust and I have shown, one can even interpret the specific pictures for latent schizophrenias, i.e., those which are not truly psychotic.

The symptomatic pictures do not apply only to the defect states, although they become clearest there, which I will show. One can often successfully ask at the onset of the disease what kind of schizophrenia the patient has. That it is a systematic form can generally be determined by the creeping onset which lacks many process symptoms. The "combined forms" can, however, produce somewhat stormy process symptoms which will be discussed later. I discuss the process symptoms only briefly because they are useless in terms of differentiating the individual forms.

Fish - A systematic schizophrenia is an illness in which a circumscribed group of paranoid, or hebephrenic, or catatonic symptoms occurs and no marked change in the symptoms and signs takes place once the syndrome is established. Leonhard compares these varieties of schizophrenia to the neurological system disorders, such as Friedreich's ataxia, Parkinson's disease and other degenerations confined to subsystems of the nervous system. He has described six systematic paraphrenias, six systematic catatonias and four systematic hebephrenias and asserts that there is no overlap among the three major systematic groups. On the other hand, Leonhard agrees that overlap does occur between subgroups within the major groups. He calls these combinations of two subgroups combined forms. Astrup and Fish regard the Leonhard subgroups as constellations of symptoms and classify an illness in the subgroup which it most resembles. If there are minor symptoms typical of a different subgroup, then the illness is classified as belonging to the first subgroup with additional symptoms of the second subgroup. Leonhard, however, has maintained that the combined forms may show different symptoms from either of the constituent subgroups, because of interaction between the symptoms.

A. THE SIMPLE CATATONIC FORMS

1. Parakinetic Catatonia

Leonhard - The hyperkinesis, which often develops only after stimulation, draws its characteristic form from the nature of the movements. Voluntary motions are unnaturally choppy, and the involuntary movements are even more so and often reminiscent of choreiform movements. The flowing connection between processes is absent: a motion develops, can stop for a moment, and then the next one begins with to transition. The motor process is correspondingly choppy, even when the individual motion is not being accelerated. In terms of content, the involuntary motions are distorted reactive and expressive motions in which the facial expressions participate strongly. Simple motions, more reminiscent of chorea, are also common. In the defect state, the parakineses can still be varied, but certain forms are always repeated as bizarre gestures. The actual disorder of motion is also expressed in speech. The words are chopped off, produced in isolated jerks, and generally, only short, non-grammatical sentences are built. In both the oral and written expressions of the patient, one finds both insightful remarks and inconsistent remarks.

Fish - Parakinesia is the outstanding feature, and the patient carries out voluntary actions in an unnatural jerky, awkward way. There are also involuntary, coarse, jerking movements which resemble choreiform movements. These movements appear to be distorted reactive and

expressive movements. The face is particularly affected so that patients with this disorder are nearly always grimacing. Speech takes the form of short rapid phrases, and sentences are usually short and ungrammatical. At times, these patients make brief apposite remarks. Phenothiazines reduce the parakinesia, but the patients remain generally deteriorated.

2. Affected Catatonia

Leonhard - We find an increasing impoverishment of the involuntary motor system, so that rigidity of posture and motion develops. There are also affectations which are, at the onset, often more salient than the rigidity. In the course of the development, the motor system is limited more and more to the stereotypical motions. The impoverishment becomes even greater when the "movement affectations" recede and the "omission affectations" become dominant. Then a particularly severe lack of motion develops and the patients stay in the same spot with stiff positions and facial expressions; they may not even feed themselves and may have to be taken to the toilet.

Fish - (Refers to Affected as Manneristic) Mannerisms are most prominent, but as the illness progresses, the rigidity of motor behavior tends to dominate the clinical picture, although in the milder cases mannerisms may be still the most striking feature. In the early and mild cases the mannerisms are mannerisms of omission. Thus these latter patients tend to have a stiff facial expression and stand in a stiff manneristic posture for hours at a time. There is a loss of all involuntary movements and

these patients look wooden and move in a slow clockwork way.

Any attempt to move the patient's body leads to an almost equivalent increase in tension in the opposing muscles. This is opposition, or *Gegenhalten,* and is not always immediately obvious in mild cases. If this is so, then the arm should be flexed and extended gently and the examiner should gradually increase the speed and range of the movement. The psychological pillow is a manifestation of opposition. If the illness is severe, preservation of posture (*Haltungsverharren*) may be seen, but as a rule, this is not marked so that the limbs usually slowly return to their rest position. Sudden impulsive actions may occur even in very rigid patients. Phenothiazines usually reduce the general stiffness, but may make the mannerisms worse.

3. Proskinetic Catatonia

Leonhard - Proskinetic catatonics respond with facial expression to being addressed and despite unresponsiveness, display a certain interest in the examinations. After further stimulation, the patients begin an incomprehensible mumbling, which turns out to be a verbigeration of single expressions. In milder cases of the disease, speech is soft but comprehensible. Sensible answers can be given although they may contain several repetitions. More stimulation leads to a grasping and fastening on objects, handling of objects, plucking clothes, and rubbing of the skin. Appropriate tests reveal the proskinetic behavior clearly--the patients tirelessly grab the repeatedly offered

hand and they are stimulated to active motion by the mildest pressure, assuming any position the observer desires. If one gives opposite suggestions, the grasping and the "going-with" may be temporarily interrupted, but begin again as soon as the attention is distracted. The general proskinetic motion disorder can be explained as an increase of the tendency to respond to external stimuli automatically and with corresponding motions. The initiative of proskinetic catatonics is severly limited so that their total behavior, despite the readiness to move, seems lacking in motion. If encouraged externally, they are able to work effectively. The affectivity is severely flattened and appears as carefree satisfaction. Some patients have depressive moods which lead to scolding and aggression. In later stages, when the patients no longer speak at all but only mumble, thought can no longer be examined. Even though the patients still answer, one finds that their solutions remain incomplete without, however, becoming entirely illogical.

Fish - These patients react to external stimuli with automatic movements. If left alone, they make kneading and intertwining movements with their fingers, and "fiddle" with their skirts or trousers. They show *Mitgehen*; i.e., the patient allows his body to be moved by the slightest pressure. This is characteristic, as is forced grasping in which the patient repeatedly grasps the examiner's hand when it is presented, despite the fact that he has been told not to do so. In eliciting *Mitgehen* or forced grasping, the examiner must first tell the patient that he does not

want him to cooperate. Having done this, the examiner talks to the patient for a short time and then tries to elicit the sign.

When spoken to, these patients turn toward the examiner and murmur. Although the face is fairly expressionless, these patients do show some interest when spoken to. It is often difficult to catch what the patient is saying, but even if it is possible to make out the words, they tend to be verbigeration or stereotyped repetition of some phrase. When not spoken to, these patients do not speak, but they tend to fiddle with things, rub their skin, intertwine their fingers, knead and pick at their clothes and so on. Often they pass into ill-humored states in which they shout, scream and attack others. These attacks are abolished or diminished by phenothiazines.

4. Negativistic Catatonia

Leonhard - Negativistic catatonia is characterized by resistance. If there is no irritation, obtuse forms of refusal may not appear and the negativism is expressed primarily in omissions. Orders are not followed and answers are not given. If one presses the patients, they at first become depressive and consequently much more clearly resistant. They pull back the hand that one wants to take, they tear themselves free, they produce involuntary sounds, run away, and become aggressive. If, on the other hand, one succeeds in creating a friendly

mood by kind treatment, the patient will follow some orders, but only partially. They stretch out the hand one has asked for, but only half way and then draw it back before the words are clear. One deduces from this behavior that the patients' desire to cooperate always meets an opposing tendency. This ambivalence is better proof of a genuine negativism than irritated refusal. If one tries to overcome the resistance with force instead of friendliness, one precipitates a negativistic excitation which can become severe. States of excitation also arise without external causes. They are usually brief but associated with violent acts. The whole motor activity is somewhat impulsive and appears jerky and choppy. The posture of the patients is often peculiarly contorted.

A higher affectivity is no longer recognizable in the negativistic catatonia although patients maintain a lively instinctuality observable in greed in eating and in erotic tendencies. Thought does not appear to be very disturbed as the patients occasionally make unexpected, insightful remarks. In milder states, while they still speak, their answers are orderly.

Fish - Negativistic catatonia is characterized by true negativism; i.e., an active striving against all attempts to make contact. If the patient is approached in a friendly way and not irritated, he may partially carry out a few simple demands, so that ambivalence is seen. If the examiner is brusque and tries to overcome negativism by force, a severe period of excitement occurs.

Excitement periods with aggressiveness may occur spontaneously, but they are usually shortlived. The patients are often impulsive, and movements are awkward and jerky. The patient talks past the point (*Vorbeireden*). The answers often repeat the question in a somewhat changed form. The face is empty and expressionless, there is a general stiffness of psychomotor activity and the normal gestures and movements which accompany speech are absent. This contrasts with the readiness with which the patient turns toward the examiner and answers his questions even if they are nonsensical. *Haltungsverharren*; i.e., the preservation of a posture induced by the examiner, is occasionally seen, and sometimes echopraxia occurs. Often these patients have periods of excitement, during which they appear to hear voices and shout at them. These are abolished by the phenothiazines.

5. Voluble Catatonia

Leonhard - The essential symptom is evasion. The patients often give correct answers to simple, neutral questions. However, the more difficult and emotionally charged the question became, the more certain it is that they will be evaded. Close analysis shows that there is a curious short-circuitedness in speech which causes the patients to say whatever thought is momentarily available instead of answers processed by thought. Words that were recently pronounced often return in appropriate positions so that at least the external picture of a perserverance exists. Often, accidental external associations, even the sound of questions, determine the content of the answer. Occasionally,

completely incomprehensible words are spoken. These perhaps arise due to the simultaneous availability of several contents which they incorrectly combine. One finds these connections frequently taking the form of neologisms. Every question leads only to a very short speech impulse which immediately disappears so that most answers are brief. Generally, no sentences are built, but rather a few words are thrown together ungrammatically. Answers will be given to every question, no matter what one asks, in an abnormal readiness to speak. On the other hand, there is no compulsive speech. Left alone, these patients hardly speak at all so that they are often incorrectly called mute. The higher initiative of the patients is deteriorated as is the affect. The movements are somewhat restricted, although no real anomalies of posture develop. The facial expression is curiously empty and expressionless revealing nothing to the observer about the mental processes. The unapproachableness is emphasized by an autism in which the patients seem to not care at all about their surroundings as long as they themselves are not directly stimulated to speak.

Fish - (Refers to Voluble as Speech Prompt) Patients will answer all questions which are put to them. As a rule, they give the correct answers to simple questions; but when asked more difficult or emotionally charged questions, the posture is usually twisted; the upper part of the body is twisted in the opposite direction to the lower part and the head. One shoulder is usually held much higher than the other. These patients are very blunted emo-

tionally, but basic drives are preserved. They make sexual advances to members of the opposite sex and are very greedy. Despite their apparent withdrawal, they are able to steal food from others with the utmost dexterity. The phenothiazines produce a dramatic improvement. The negativism disappears, and they may become employable on simple ward tasks. Despite this improvement, there is, of course, a severe irreverable personality deterioration.

6. Sluggish Catatonia

Leonhard - The sluggish catatonics give sluggish answers in the early stages, and in later stages, generally give none. Instead, they look around distractedly and move their lips in whispers. From time to time, they become more excited. They speak louder with themselves or develop marked excitations in which they scream and gesticulate into space, i.e., against voices. In earlier stages, patients' remarks confirm that they suffer considerably from hallucinations. In this period, they also present fantastic confabulations which probably also play a role in the end-state, but which cannot be demonstrated due to the unapproachability of the patients. Not only speech but all other reactions of the sluggish catatonics are slowed in the end-state. However, since they speak a lot and display lively movements during their excitations, one must assume that their sluggish reactions are due to the constant distraction which causes the patients to be nearly oblivious to external stimuli. The patients' initiative is extinguished. Their own motivation is only recognizable in their behavior toward the sensory illusions. Affect, too, is only recognizable in the excited conflicts with the voices. The thought

of distracted catatonics cannot be easily judged because of their unapproachableness, but it appears to be characterized by incoherence.

Fish - (Refers to Sluggish as Speech-Inactive) When spoken to, these patients give no answers, but can be seen to be whispering and appear to be completely pre-occupied by phonemes. On the whole, the face is expressionless, but the patient tends to look perplexed and bewildered when spoken to. Unlike the proskinetic, who looks straight at the examiner with an expressionless face and mutters incomprehensibly, these patients whisper continuously and do not turn toward the examiner. From time to time, these patients become very excited and shout and scream at their phonemes. They are usually wet and dirty and require constant supervision. The phenothiazines tend to abolish the excited states, but produce little change in the general deterioration.

B. THE SIMPLE HEBEPHRENIC FORMS

1. Silly Hebephrenia

Leonhard - We find in silly hebephrenia a high degree of affective dulling along with a contented to mildly cheerful mood. Particularly characteristic is the smiling or giggling which appears in response to every external stimulus. The affective dulling is accompanied by an ethical dulling--the patients may become criminal insofar as they have a chance to be, but they do not display a tendency to childish pranks. They often have an evil character and thus display the ethical dulling. On the other hand, evil misbehavior can be due to depressions which do occur in

silly hebephrenics, occasionally transforming the carefree contentment. In acute states of the disease, different kinds of moods are common: euphoric, depressive, or irritated. Activity also suffers from the increasingly dulled affect. The patients lose their initiative more and more and live through the day without doing anything. In end-states, with severe lack of affect and motivation, the silly hebephrenics can be reminiscent of catatonics. Their posture and motion are, however, not at all catatonic, and their characteristic smile clearly marks them as hebephrenic.

Fish - The outstanding features are the severe blunting of affect, the contented or cheerful mood, and the smiling or silly giggling when spoken to. The apathetic hebephrenic is often contented or somewhat cheerful, but he never shows the typical smiling or giggling. Silly hebephrenics may play spiteful childish tricks on other patients or nurses. These patients have little or no initiative. Phenothiazines tend to reduce the silliness and make these patients more amenable, but even so, they do not produce a radical change in behavior.

2. Eccentric Hebephrenia

Leonhard - Eccentric hebephrenia often begins with compulsive behavior, which can develop into mannerisms if the care is inappropriate. There is, above all, a monotonous speech and querulousness, the uniformity of which gives the impression of the manneristic eccentric form. The patients' mood is somewhat unhappy. The affective flattening is more salient however; even their complaints are not accompanied by more profound feelings. An ethical

dulling is also present and can lead to asocial behavior. The uniform motor tendencies of the patients are best satisfied by begging. During the onset, the increasing flattening of the affect is accompanied by frequent states of depression, which can be associated with irritated excitations. In later stages of eccentric hebephrenia, only mild mood fluctuations appear. The patients' remarks lead to the deduction that their thought is impoverished. Intellectual achievement is, however, only mildly impaired.

Fish - The outstanding feature is the depressed cheerless mood, which from time to time passes into an irritated mood. There is a marked flattening of affect. Usually patients are querulous and make the same complaint repeatedly in a rather manneristic way. A mannerism often takes the form of senseless collecting of material of various kinds. These patients have to be differentiated from apathetic hebephrenics, where the mood state is one of general indifference, and episodes of hallucinatory excitement occur. The eccentric hebephrenic has a relatively mild defect and is able to work in the mental hospital. Phenothiazines tend to make these patients more cooperative and less unhappy.

3. Insipid Hebephrenia

Leonhard - Insipid hebephrenia is characterized by affective dulling. In neutral conversations, one notices a lack of emotional participation; in conversations dealing with themes that should move the patient, the lack of affect is even clearer. The patients, however, do superficially

remain approachable so that conversations can be carried on successfully. The affective flattening and the lack of interest result in a lack of initiative even though the patients adapt to daily life without special pressure. The mood is generally characterized by carefree contentment. This basic state, in which the lack of affect appears to be the only obvious symptom, is interrupted from time to time by brief depressive states in which the patients are irritated, anxious, or, more rarely, euphoric. In their irritation, they tend toward ideas of reference and are sometimes excited and aggressive. Sensory illusions that often dominate the picture and affect allsenses, are more characteristic, and most often take the form of voices. Although the patients, in agitation, may scold the voices like paranoid patients, later they always have clear insight into the illness. Because of this, one can speak here of pseudohallucinations. During the onset of the disease, the depressions are often massive and can be reminiscent of catatonic states.

Fish - (Refers to Apathetic rather than Insipid) There is marked flattening of affect, but the patient is able to carry on a normal conversation. There are short-lived episodes of irritated mood, with phonemes and delusions of reference. In such states these patients may attack others; but, unlike the irritated autistic hebephrenic, they do not attack one selected person. When the excitement dies away, the patient is able to discuss his phonemes in a dispassionate way. Although there is a general lack of initiative, these patients take part in the everyday activity, require only a little supervision and are able to look after themselves.

Treatment with phenothiazines prevents the hallucinatory excitements, but does not change the affective blunting and lack of initiative.

4. Autistic Hebephrenia

Leonhard - Autistic hebephrenics live only for themselves--they are close to no one and seem to be untouched by what goes on around them. Their facial expressions heighten the impression of autism, since they are always curiously unfathomable and reveal nothing of the patients' inner lives. One can say, however, that their inner lives are impoverished, as interests and independent opinions are usually absent. It is only in the intermittent depressive states that affectivity is visible, and then only as an irritation which easily grows into aggression. Intelligence questions are usually answered inadequately, but the insufficiency is considerably less if the patient is ready to answer. The answers tend to be short and disinterested. The patients no longer have high initiative, although they can be led to perform tasks demanding a certain amount of independence. Their moods are usually unhappy with traces of suspicion. These moods are reminiscent of the affect of the eccentric hebephrenics and contrast with the carefree contentment of the silly and insipid forms.

Fish - These patients show such marked autism that they reject all human contact and avoid meeting or speaking to others. There is also some blunting of affect, and the facial expression is stiff and impenetrable. As a rule, they work quite well in jobs requiring some independence of action, especially if the work does not involve much contact with

others. If these patients can be persuaded to take phenothiazines, a remarkable improvement occurs. They become much more friendly, take a renewed interest in their families and may be able to return home on leave.

C. THE SIMPLE PARAPHRENIC FORMS

1. Hypochondriacal Paraphrenia

Leonhard - Hypochondriacal paraphrenia is characterized, above all else, by sensations which generally occur in the inner organs and by the grotesque nature which makes them incomprehensible to the normal person. There are also voices, generally insulting, the presence of which is more painful than the content. Partly, it is a matter of isolated expressions with no recognizable meaning, so that the patients hardly notice the content. In early cases, however, there is often a closer connection to the patients' thoughts; the symptom of thought vocalization can develop. The sensations are even more painful than the voices. These patients complain, often in a querulous manner, and they generally tend toward querulousness. This is most likely due to the unhappy-discontent mood which characterizes hypochondriacal paraphrenia. At the onset, there are depressive states more often than in other forms. The affectivity is well preserved and the patients remain interested in their family. Thought is disturbed in that the patients can be fixated only with difficulty and their tendency is toward linguistic errors. One can also speak of unconcentrated thought.

Fish - Hypochondriacal paraphrenics have a depressed, morose, irritable mood and complain bitterly about phonemes and unpleasant bodily hallucinations. The phonemes usually consist of disconnected phrases, which the patient is rarely able to reproduce accurately. He complains more about the phonemes per se than about their content. Unlike the phonemic paraphrenic, these patients do not usually attribute their phonemes to other people, but rather to machines or rays. There is no gross intellectual defect, and these patients are usually trustworthy, reliable workers. The phenothiazines tend to diminish the intensity of the hallucinations and make the patient less depressed.

2. Phonemic Paraphrenia

Leonhard - Phonemic paraphrenia generally begins with voices which are sometimes present at first with other symptoms, especially affective changes and ideas of reference. The voices are of a different nature than those of hypochondriacal paraphrenia. They are closer to the thoughts and the emotions of the patients. Due to their predominately unpleasant content, they are perceived as annoying and not because of their mere presence. Sensations are found rarely in the acute state. When they are found, it is only as accessory symptoms and later, they disappear fully. The patients often complain angrily about their sensory illusions, but they are not as pained as the hypochondriacal patients. The mood is more balanced and the affectivity is well preserved. In everyday conversations, thought appears undisturbed. If, however, thought problems are presented, one regularly finds abnormalities in which the patients

cannot logically be moved toward a goal, but rather talk imprecisely around the issue. Their thought can thus be described as blurry. Simpler problems, however, are solved correctly.

Fish - The only important symptom in the phonemic paraphrenic group is the phoneme. The hallucinatory voices are closely related to the patient's thinking, and they talk about things which are unpleasant and disturbing to the patient. The patient is often seen talking to the voices and tends to treat them as real people. He may attribute the phonemes to other people, spirits or apparatus and sometimes experiences them as coming from a part of his own body.

These patients are usually very well behaved and may be able to live outside the hospital for years. Phenothiazines tend to make the voices less insistent and more tolerable.

3. Incoherent Paraphrenia

Leonhard - Incoherent paraphrenia displays a very marked hallucinating which can at first include sensations, but which later excludes nearly all except those which are auditory in nature. Facial expressions and eyes show that the patients are inwardly distracted. They also continuously whisper to themselves and many have periodic hallucinatory excitations in which they speak loudly with their voices and scold. One can deduce from the patients' behavior that they nearly always hallucinate, even while they are being directly spoken to. This differentiates them from other hallucinatory paraphrenics because, externally,

they display no interest nor initiative, but rather appear numb and lacking in motivation. They answer questions taciturnly and with little volume. Their expressions reveal a severe thought disorder, in which both incoherence and contaminations appear.

Fish - Incoherent paraphrenics hear phonemes continuously and can be seen muttering, whispering or talking to the voices. They tend to look here and there during the interview; and if they look at the examiner, they do so with a peculiar rigid gaze. Their answers to questions are brief and perfunctory. Hallucinations may become entangled with the questions. They have no initiative and show no interest in what is going on around them. They have a very severe formal thought disorder. This is the most severe variety of systematic paraphrenia. These patients are very dilapidated, are usually wet and dirty and need constant supervision. From time to time they may scream and shout at the phonemes. Phenothiazines decrease the hallucinations to some extent, but do not lead to any marked improvement.

4. Fantastic Paraphrenia

Leonhard - Fantastic paraphrenia is an equally hallucinatory and delusional form of schizophrenia. Sensations, often grotesquely described, are conspicuous. Visual illusions also belong to the clinical picture, but voices are not so striking a symptom. Especially characteristic of fantastic paraphrenia are scenic experiences in which the visual element predominates, although auditory and somatopsychic components are also sometimes present. Horrible things are often hallucinated, for example, the torture

and murder of many people at once. This is in itself a fantastic trait. Further, peculiar ideas are regularly expressed by the patients. These ideas typically are not at all limited by natural law or normal experience and thus appear absurd. Similarly illogical are the misidentification of people in the surroundings who are most frequently confused with famous personalities. Ideas of grandeur also have an absurd character in that the patients often raise themselves to incredibly high societal positions. They draw no conclusions from their megalomania, however, and cooperate in institutional life. The patients' affect is flat; if one laughs at their ideas or otherwise irritates them, they may get slightly angry, but the affect is never deep. On the other hand, they maintain an interest in the occurrences in their surroundings and in their families. When presenting their fantastic ideas, they seem somewhat confused, but questioning can produce clear thought processes. Precise examination which should include intelligence testing, reveals that derailment is characteristic of their thought disorder.

Fish - In fantastic paraphrenia, all varieties of hallucination are present. Visual hallucinations are very prominent, and bodily hallucinations of a grotesque and fantastic kind are always present. Mass hallucinations in which thousands of people are seen or heard crying or being murdered are present. All individuals in the patients' environments are misidentified. These patients also maintain they have made fantastic voyages. The boundary between life and death, and the limits of age, time and space lose all

meaning, so that the patients claim to have been dead, buried and restored to life, to have lived for thousands of years, and so on. Often, birds, trees and inanimate objects speak to them.

Usually the affect is shallow; and, when laughed at these pateints show little resentment; but some may flare up with anger during the interview if the examiner is tactless, although the affect soon passes away. Such patients are often cheerful and talkative. When discussing everyday affairs, their thought may be reasonably ordered; but when they begin to talk about their hallucinatory and delusional experiences, they soon become muddled and show gross formal thought disorder. These patients need supervision. Phenothiazines tend to make them a little less troubled by their hallucinations, but do not substantially affect the clinical picture.

5. Confabulatory Paraphrenia

Leonhard - Confabulatory paraphrenia is dominated by errors of memory which appear in the form of integrated experiences. They are generally fantastic in form and refer to other countries, continents, or even planets. Apparently, freely imagined contents take on the sensuous character otherwise reserved for memories. The immediate surroundings are not drawn in the confabulations, but are instead correctly judged. Apparently the patients' awareness allows the confabulations to stand only if they occur in other places. It is also due to this self-awareness that some patients speak of dreams, trances, or other exceptional states during which the fantastic occurences

allegedly happened. The abnormal sensualization of the imagined contents is probably related to the "perceptive errors", which often occur. The ideas of grandeur are due to a somewhat elevated mood which is also characteristic of the confabulatory paraphrenia. The genesis of the fantastic coloration of other confabulations is also probably due to the elevated moods which tend toward a sensational character. The peculiar thought disorder operates in the same manner, injuring abstract thought and leaving the patients aware of concrete elements but unable to solve abstract problems.

Fish - Confabulatory paraphrenics produce fantastic confabulations, about voyages to distant parts of the world, visits to the moon, stars or planets. The mood is euphoric and there are usually extravagant grandiose delusions. Formal thought disorder is well marked. As a general rule, these patients need supervision and they are unable to work.

6. Expansive Paraphrenia

Leonhard - During the onset of expansive paraphrenia, sensory illusions can appear; often after the disappearance of the accessory symptoms, there is a pure delusional disease picture. The direction of the delusion is expansive and ideas of persecution are absent. The ideas of grandeur usually have a moderate content, but the patients always try to live out their megalomania externally. While fantastic and confabulatory patients only speak about their high position, but do not behave expansively, the expansive patients always try to demonstrate their impor-

tance. Thus, the whole personality is affected by the delusion. In posture and motion, in contact with other people, in their dress, and in secret writings, the patients try to act important. Their expansive activity is often very uniform, demonstrating the patients' poverty of ideas in contrast with the wealth of ideas of the fantastic and confabulatory patients. When the patients talk about their megalomania and present their wishes and complaints, they often develop a certain loquacity. They also carry out their expansive habits energetically. Otherwise, they show little initiative and little interest. The patients' thought suffers particularly from a linguistic disorder involving many grammatical errors and neologisms. The thought disorder characteristically displays severe imprecision rather than completely erroneous concepts. Thus I could speak of a coarsening of the thought.

Fish - Expansive paraphrenia is purely delusional, and the patients have grandiose delusions, which lead them to take on haughty attitudes and to behave as if they were important personages. The mood is usually euphoric, and they try to impress others by their style of dress, the use of high-sounding words. There is always quite marked formal thought disorder. These patients are unable to work and need a good deal of general supervision. Phenothiazines may cause slight improvement, but their effect is not as marked as in phonemic and hypochondriacal paraphrenias.

V. THE COMBINED SYSTEMATIC SCHIZOPHRENIAS

Combinations occur only with three forms –catatonic, hebephrenic, paraphrenic - not between the forms.

A. COMBINED SYSTEMATIC CATATONIAS

1. Voluble-parakinetic type –The readiness to respond becomes a pressure of speech. Impulsivity is seen. Content of thought becomes confused and neologisms appear. Avoidance is distorted by parakinetic elements.
2. Voluble –proskinetic type - Avoidance is transformed into confused pressure of speech – to the point of incomprehensibility. Much verbigeration. Short, senseless answers with neologisms.
3. Voluble-affected type – Avoidance manuevers are more intentional and deliberate. Echolalia present and mannerisms more confined to speech rather than movements.
4. Voluble-negativistic type – Speech avoidance is more uniform than in voluble-affected combination. Tend to give same answer to all questions. Periods of silence.
5. Voluble-sluggish type - Avoidance by giving unnecessarily expanded answers with many repetitions. Avoidance is not purposeful. Patient constantly occupied with self, whispers to self and appears preoccupied by hallucinations.
6. Sluggish-proskinetic type – Fantastic confabulatory ideas appear and distract patient. Soft, monotonous speech.
7. Sluggish-parakinetic type – Fantastic confabulatory ideas but not as multifaceted as in sluggish-proskinetic combination; but hallucinatory distractions more pronounced. Derailment presesnt. Parakinetic restlessness apparent.

8. Sluggish-negativistic type - Hardly any responses. Exhibit hallucinatory restlessness. Fuss with body and clothes. Impulsive aggression occurs. Very low motivation.
9. Sluggish-affected type.--Also give no responses. Do not face examiner. Rigid posture. Stereotyped movements and postures. Resist if shoulders pressed.
10. Proskinetic-parakinetic type - Severe unrest with repetitive grimacing and gesticulations. Pressured speech. Speech tone is low and often mumbling. Severe verbigeration. Proskinetic readiness apparent.
11. Proskinetic-affected type - Verbigeration prominent. Soft speech with mumbling. Often incomprehensible. Mannerisms present but rigidity reduced.
12. Proskinetic-negativistic type - Negativism cancels out readiness to respond. Tend to answer only once or say, "I don't know". Much grasping, lacing of fingers and handling of clothes.
13. Negativistic-affected type - Most severly unattentive. Never answer or look up at examiner. Do not come to interview voluntarily. Mild twisted posture.
14. Negativistic-parakinetic type - Hitting and knocking movements. Disjointed inappropriate remarks. Motor unrest.
15. Parakinetic-affected type - General unrest even when patient not addressed. Whole body involved in distorted motions. Rigidity present. Thought process less impaired than in simple parakinetic form. Take small steps backward, forward and sideways when standing.

B. COMBINED-SYSTEMATIC HEBEPHRENIAS

1. Eccentric-silly type - Stereotyped, repetitive conversation. Wish to be released from hospital common. Repeated laughter rather than simple smiling. More active than simple types. Incomplete rather than illogical answers.
2. Eccentric-insipid type - Marked mannerisms. Neologisms present. Affective flattening. Stereotypes of omission; e.g., not eating certain foods, stopping before doorways.
3. Eccentric-autistic type - Mannerisms; e.g., peculiar gait, distaste for touching, are present. Complaining and accusatory to point of vergiberation. Complain about voices without talking about contents. Depressed moodiness common.
4. Silly-autistic type - Alternates between indifference and silliness. Isolate selves from others but respond when addressed. Give non-committal or repellant answers.
5. Silly-insipid type - Stereotyped laughter. Active and talk freely about voices but not content. Hallucinations, usually somatic, more frequent than in simple type. More aggressive.
6. Insipid-autistic type - Alternating disinterest and responsiveness. Hallucinations more marked and complained about. Slowed thought processes. Derailment.

C.COMBINED SYSTEMATIC PARAPHRENIAS

1. Hypochondriacal-fantastic type – Absurd ideas. Misidentifcations. Confused speech with pressure. Need to repeat questions. Neologisms present.

2. Hypochondriacal-phonemic type –Difficulty in fixating on a single idea. Evasive answers. Difficulty in concentrating. Hesitate before answering. Voices predominate over bodily hallucinations. Restless and whisper to voices.

3. Hypochondriacal-incoherent type – Whisper continually to self. Difficulty in attending questions. Distractable. Severe thought disorder with almost constant hallucinations.

4. Hpochondriacal-expansive type – Tend to deny hallucinations. Dissimulations. Supercilious posture and manner. Confused speech with neologisms.

5. Hypochondriacal–confabulatory type – Body sensations built up in confabulatory manner; e.g., animals or things inside body, organs absent. Lacking in motivation and are taciturn.

6. Confabulatory-fantastic type – Absurd ideas and grandiose delusions. Misidentifcations. Bodily or other hallucinations present but poorly articulated. Rapid confused speech. Derailment.

7.Confabulatory-phonemic type –Visual hallucinations dominate picture. Voices also important and tend to repeat patients' thoughts. Patient enjoys talking about experiences.

8.Confabulatory-expansive type – Fantastic thoughts tend to be more plastic with unrelated elements mixed in. Haughty manner and condescending attitude. Neologisms frequent.

9.Expansive-hypochondriacal tpe – Patient unwilling to talk about hallucinations. Severe confusion. Misidentifications. Tend to ignore conversational questions but do better on test questions. Supercilious behavior.

10.Expansive-phonemic type - Willing to discuss hallucinations. Often proud of them. Fuzzy thinking. Supercilious.

11.Expansive –inherent type - Most severely confused. Verbigeration. Respond more to hallucinations than to questions. Very distractable. Pressred speech.

12.Incoherent-fantastic type – Severe thought disorder but with periodic sensible responses. Derailment. Few neologisms. Hallucinate constantly but more attentive to examiner than simple type.

13.Incoherent-phonemic type – Confusion intensified by pressure of speech. Severe thought disorder with incoherence, contaminations and neologisms. Repetiive answers. Pay little attention to examiner. Preoccupied with auditory hallucinations , but can ignore them occasionally.

14.Phonemic`-fantastic type – Confusion and repetitive answers. Derailment and fuzzy thinking. Somatic delusions prominent.

VI. ASTRUP'S CATEGORIZATION OF THE LEONHARD SUBTYPES

ATYPICAL PARANOID SCHIZOPHRENIAS (Unsystematic)*

- Affect-laden paraphrenia
- Schizophasia (cataphasia)

CHRONIC HALLUCINATORY SCHIZOPHRENIAS (Systematic)

- Phonemic paraphrenia
- Hypochondriacal paraphrenia

SEVERELY DETERIORATED PARANOID SCHIZOPHRENIAS (Systematic)

- Confabulatory paraphrenia
- Expansive paraphrenia
- Fantastic paraphrenia
- Incoherent paraphrenia

CATATONIC SCHIZOPHRENIAS

- Periodic catatonia (Unsystematic)
- Parakinetic catatonia (Systematic)
- Speech-prompt catatonia (Systematic, voluble)
- Proskinetic catatonia (Systematic)
- Speech-inactive catatonia (Systematic, sluggish)
- Manneristic catatonia (Systematic, affected)
- Negativistic catatonia (Systematic)

SLIGHTLY DETERIORATED HEBEPHRENIC SCHIZOPHRENIAS (Systematic)

- Autistic hebephrenia
- Eccentric hebephrenia

SEVERELY DETERIORATED HEBEPHRENIC SCHIZOPHRENIAS (Systematic)

- Shallow hebephrenia (Insipid)
- Silly hebephrenia

* = (Leonhard designations)

ATYPICAL SCHIZOPHRENIAS

The outstanding feature of affect-ladened paraphrenia is that the paranoid delusions have a strong affective loading which is not the case in other types of chronic paranoid schizophrenia. In the initial stages of the illness, depression and elation frequently occur. These, however, tend to disappear as the illness progresses. Psychotropic drugs are usually quite effective in reducing the affective loading of the delusions, but less so with the delusions themselves. Patients with affective-laden paraphrenia have intact personalities, fairly good affective contact and are rarely autistic. When discussing their delusions, they may be illogical and ramble on, but on neutral topics their verbal communication is usually adequate.

The essential feature of cataphasia is the breakdown of speech and thought. This type of psychosis occurs in both excited and inhibitory forms. There is gross confusion of speech with occasional neologisms. This contrasts very much with the well-ordered behavior and good affective contact the patient shows. Delusions and hallucinations may occur, but the speech distortions make it difficult to assess the presence of these symptoms.

In the course of illness, cataphasia resembles affect-laden paraphrenia. It may be difficult to distinguish the two types of atypical paranoid schizophrenia. There appears to be a transient group with both affect-laden delusions and a breakdown of speech and thought.

Affect-laden paraphrenia and cataphasia tend to have a later onset of illness than the systematic subtypes. Affect-laden paraphrenia is seen in females much more than males and this is different from most other subtypes. Precipitating factors are usually found mainly in the form of prolonged mental conflicts. Sensitive and self-assertive personalities are especially

predisposed toward these unsystematic subtypes. Like the cycloid and manic-depressive psychoses, affect-laden paraphrenia has a large proportion of depressive features, and they differ from other types of schizophrenia with much less emotional blunting and personality change.

CHRONIC HALLUCINATORY SCHIZOPHRENIAS

Phonemic paraphrenia usually begins as a paranoid hallucinatory psychosis. In the chronic phase, verbal hallucinosis is the most characteristic symptom. The voices make comments on the patient's thoughts and previous life experiences. The patient may also answer the voices which they believe come from people around them. They may often become angry and complain about the voices. Affect is usually euphoric or slightly blunted, but not depressive. Drugs make the hallucinations less distressing but do not remove them. As the illness progresses, the patients seem to care less about the voices and therefore complain less.

The central symptoms of hypochondriacal paraphrenia are combinations of auditory and bodily hallucinations. The voices are usually disconnected phrases, not complete sentences as in phonemic paraphrenia. The patients complain mainly about the voices and seem to care less about the content. The patients do not attribute voices and hypochondriacal sensations to persons around them, but rather to themselves or to unknown persons or organizations. There is usually a blunting of affect, although the patient may be depressed, irritable and discontented. They complain that they suffer very much from the voices, but again, not so much from the content. The distinguishing feature between this subtype and phonemic paraphrenia is the presence of hypochondriacal (bodily) sensations. These patients are usually good workers. Phenothiazines tend to reduce the intensity of symptoms, but are less effective than in phonemic paraphrenia. Personalities tend to be fairly well preserved, despite the hallucinatory content.

In the initial stages of illness, these two types of chronic hallucinatory psychosis are difficult to distinguish. Precipitating factors are often seen, and the illnesses are often of short duration. The age of onset tends to be a late one. As a general rule, onset at a later age is associated with slight defect in the chronic stages.

SEVERELY DETERIORATED PARANOID SCHIZOPHRENIAS

Confabulatory paraphrenia has, as its central symptom, confabulations. The patient relates fantastic stories about their experiences, travels, and identity. The mood is usually euphoric, but there is considerable blunting. The patients have difficulty in carrying on an orderly conversation and their working ability is slight. The total impression is one of deterioration, but less so than the other subtypes.

Expansive paraphrenics adopt a kind of haughty pose and take on a superior atitude when dealing with others. They can be distinguished from the confabulatory and fantastic paraphrenias by this pose and attitude. Often these patients try to impress people with their style of dress and their high-sounding phrases. The mood is usually euphoric, but the affect is blunted. Verbal communication is poor, work capacity slow and deterioration marked.

Fantastic paraphrenias tend to have a very rich symptomatology. Expansive ideas are practically always present. Mass hallucinations are often reported as are somatic and scenic hallucinations.

Expansive and confabulatory paraphrenias can be distinguished from fantastic paraphrenias in that they tend to present a more monosymptomatic picture.

Incoherent paraphrenics have too poor a communication to express elaborate hallucinatory experiences, but they may utter sentences suggesting such features. Their behavior is generally as disordered as their speech. The central symptom is massive hallucinations. These patients appear to be con-

stantly conversing with voices. They often look at their surroundings and make gestures as if discussing and querreling with invisible people. They pay very little attention to their surroundings, seldom answer questions, have no initiative or interest in anything. These patients have no working ability and may need help in dressing, eating, and cleanliness. They represent the most severe subtype of schizophrenic deterioration.

In these severely deteriorated paranoid schizophrenics, the onset of illness is usually rapid and the symptoms are seen quite early in the illness. Depression is rarely seen, while emotional blunting seems to be present in all cases. In the very early stages of the illness, it is difficult to distinguish among the four subtypes. Incoherent paraphrenias have the earliest age of onset, while the fantastic subtype has the latest. Age of onset tends to be later in the severely deteriorated catatonic and hebephrenic subtypes.

CATATONIC SCHIZOPHRENIAS

In periodic catatonia, natural grace of movement is absent, and reactive and expressive movements lose their meaning. The shifting course of the illness with remissions and exacerbations is the main characteristic of this unsystematic subtype. In the early stages of the illness, it is difficult to differentiate from other subtypes. Phenothiazines appear to be quite effective in reducing the symptoms. Periodic catatonias have more admixtures of depression, excitation and confusion. They are usually more rich in symptomatology than the symptomatic catatonias. Emotional blunting is much more frequent in the systematic catatonias than in periodic catatonia. The systematic catatonias usually have no precipitating factors in the outbreak of the psychosis while the periodic catatonias do. Both unsystematic and systematic catatonias have a comparatively early age of onset.

Parakinetic catatonia is characterized by bizarre actions. Voluntary actions are carried out in an unnatural, awkward way. The movements appear to be distorted and the speech cut up and expressed in bursts.

The most essential symptom of speech-prompt catatonia is "*Vorbeireden*". The patient frequently gives the correct answer to simple questions, but not so to more difficult or emotionally charged questions. In contrast to the readiness of speech, there is a general stiffness of movement. The facial expression is particularly empty and expressionless.

The proskinetic catatonics have a tendency to turn toward the examiner and allow themselves to be directed automatically. When spoken to, they usually begin to mutter. If it is possible to catch what the patient is saying, the muttering turns out to be verbigeration.

Sluggish catatonics give answers very slowly in the early stages of their illness. In later stages, they do not answer at all. These patients seem to be constantly hallucinating. One can see them whispering or laughing at unseen people.

In manneristic catatonia, an increasing impoverishment of involuntary motor activity occurs. This results in stiffness of posture and movement. In addition, there are mannerisms which, in the beginning of the illness, are more prominent that the stiffness. These patients have a stiff facial expression and may stay in the same position for hours. During the examination, opposition (*Gegenhalten*) can be induced.

Negativistic catatonia is, to a great extent, the opposite of proskinetic catatonia. These patients show an active striving against all attempts to make contact. The negativism appears to be rather automatic. Some ambivalence in the attitude can be observed, however.

A common trait of all the systematic catatonias is a severe deterioration. These patients need care in eating, dressing and cleanliness. Verbal

communication is usually poor and they have no working ability. Phenothiazines tend to reduce the incidence of excited and aggressive behavior.

SLIGHTLY DETERIORATED HEBEPHRENIC SCHIZOPHRENICS

Emotional blunting combined with extreme autism are the central symptoms of autistic hebephrenia. The patients avoid contact with others and tend to reject attempts to associate with them. The facial expression is stiff and impenetrable and does not reveal what the patient is feeling. The mood is irritable and dysphoric and, at times, can become aggressive. Autistic hebephrenics as a rule have good working ability and can work independently. Hallucinations are rarely observed and patients do not discuss their delusions.

Eccentric hebephrenics have affective changes in the direction of irritability, dysphoria, discontented cheerlessness. They may give the impression of being depressed, but emotional blunting is the predominant affective feature. These patients are generally careless in their personal care, have little interest in their families, and lack initiative. They often express hypochondriacal sensations in stereotyped way. They are querulous and repeat the same complaint in a manneristic fashion. They collect worthless things and carry out compulsive movements. Phenothiazines tend to make the patients less irritable and counteract the eccentric behavior, but do not essentially affect the emotional blunting.

SEVERELY DETERIORATED HEBEPHRENIC SCHIZOPHRENIAS

Insipid hebephrenics showed marked flattening of affect. Mood is usually cheerful and contented, but there may be periods of excitement and aggression which frequently lead to their hospitalization.

There is no perceptible emotional response in situations where such response would be appropriate. There is a lack of initiative and poor working ability. Phenothiazines reduce hallucinatory excitement but do not affect

ability. Phenothiazines reduce hallucinatory excitement but do not affect emotional flattening.

Silly hebephrenics show extensive affective blunting. Smiling and giggling - especially when spoken to - are prominent in almost all situations. These patients play spiteful - sometimes malicious - tricks on others. Usually, they do not have excitatory periods. They are disorganized and unable to carry on an ordered conversation or a work program. Phenothiazines have no effect on the emotional blunting or giggling, but patients appear less disturbed and are less "playful".

VII. INSTRUCTIONS FOR THE LEONHARD CLASSIFICATION SCALE FOR CHRONIC SCHIZOPHRENIAS

The Interview

While a structured interview for the Leonhard Scale has not been developed, raters are advised to evolve a systematic, semi-structured approach for acquiring the information necessary for classification. With such an approach, the chances of omitting or neglecting vital areas of assessment will be reduced and the rater will establish for himself a routine context in which to compare patients and symptomatology. This is particularly important since classification in the Leonhard system depends upon subtle distinctions among a group of relatively homogeneous symptoms.

Consequently, the rater must be thoroughly familiar with the definition of each symptom as presented in the Glossary (VII). The rater may find that some of the definitions appear arbitrary or forced. Nevertheless, it is necessary that the defined context of the symptom be followed since it has been found that deviation from these definitions leads to reduced reliability. Additionally, the Leonhard symptoms are of different types. Some symptoms are reasonably independent of or, in some cases, supersede other symptoms; i.e., when "present" other symptoms are "overridden" or omitted. Other symptoms form a continuum - the higher-level symptom rated instead of the lower. Frequency forms the rating base for some symptoms, while the intensity is the rated attribute in others. This makes the task of rating more complex than usual. All of which explains the emphasis on thorough learning of the classification scheme.

There are three major aspects of schizophrenic behavior or psychopathology which must be assessed - thought, affect and motility. A combination of careful observation and probing questions is required to obtain the necessary data. Recognizing that communication with chronic schizophrenics can be difficult at times, the mix of observation and questions will vary from patient to patient; and, in itself, the mix provides a cue to interrelationship of the three major assessment areas. This interrelationship is the keystone of the Leonhard classification. The class of systematic schizophrenia to which a patient is eventually assigned depends upon which of the three aspects - thought, affect, motility - is dominant. In fact, when dominance is absent, the patient cannot be classified as a systematic schizophrenic - rather, he is assigned to one or another of the unsystematic schizophrenias.

The evaluation of thought is based predominantly on verbal interchange between patient and examiner. The structure and content of thought as well as the patient's affective reaction to the thought elements; i.e., hallucinations and delusions, must be carefully delineated. In assessing the presence of formal thought disorder, Leonhard advocates the use of a formal test and one has assembled from material presented in "The Classification of Endogenous Psychoses" (IX).

Observation plays a greater role in the assessment of affect. The type, intensity and appropriateness of the affect must all be assessed. Similarly, the assessment of motility requires close observation of spontaneous or voluntary movements of the patient as well as the responses brought forth by induction.

ASTRUP'S DECISION PROCESS IN CLASSIFICATION

When a thought disturbance is primary, start by establishing whether the patient has delusions or hallucinations. If expansive delusions are present, the patient is classified as a severely deteriorated paranoid. If there is a severe deterioration and a progressive course of illness are present, the four subtypes to be considered are; expansive, confabulatory, fantastic and incoherent paraphrenias (listed in order of severity). Incoherent paraphrenias usually are too sick to express the complex ideas of the other subtypes.

The next step is to see whether the patient has a chronic hallucinatory psychosis. A moderate defect is usually classified as phonemic or hypochondriacal paraphrenia. Phonemic and hypochondriacal paraphrenias may be distinguished by the fact that the phonemic subtype is characterized by auditory hallucinations while the hypochondriacal subtype is characterized by bodily hallucinations. Mild defects with an episodic course of illness are usually classified as unsystematic. If affectively-charged delusions dominate the clinical picture, the subtype classification should be affect-ladened paraphrenia. When speech disturbances of a mild sort dominate the picture, the classification should be cataphasia. The Proverbs Test is usually an effective way to elicit the typical thought and speech disturbances.

The next step is to sort out the catatonic schizophrenias. The milder defects with some akinesias or periodic hyperkinesias belong to the unsystematic periodic catatonia group. When the patient is able to communicate verbally, "*Verbeireden*" is characteristic of the voluble catatonia. Parakinetic catatonia is usually recognized by the jerking movements which resemble choreiform movements. Proskinetic catatonia shows "*Mitgehen*", while the manneristic catatonic exhibits "*Gegenhalten*". Negativistic catatonia is charac-

terized by true negativism in which the patient actively strives against all attempts to make contact. The last subtype of systematic catatonias is the sluggish subtype. When spoken to, these patients can be seen to be whispering and appear to be almost completely preoccupied by auditory hallucinations.

All hebephrenic types of schizophrenia are classified as systematic. A distinction is made between mild and severe defects. The severe defects tend to have a euphoric mood, and a marked flattening of affect. The silly hebephrenics are easily recognized by the smiling and pronounced giggling under any external stimuli. The insipid hebephrenics are able to carry on simple conversations, but give no emotional response when appropriate. The mood here in the insipid subtype is usually cheerful and contented, although the patients may occasionally become hallucinated, irritable and aggressive.

The mild hebephrenic defects have affective changes in the direction of irritability, dysphoria, discontent and cheerlessness. Autistic hebephrenics shut themselves up and avoid all contact with others and also attempt to reject any contact with them.

Eccentric hebephrenics have an affective flattening as the central symptomatology. They may also give the impression of being depressed and frequently have hypochondriacal complaints. These patients are stereotyped in their verbal utterances and often show eccentric and manneristic behavior. Many of them collect worthless things or carry out compulsive movements such as praying or eating special foods.

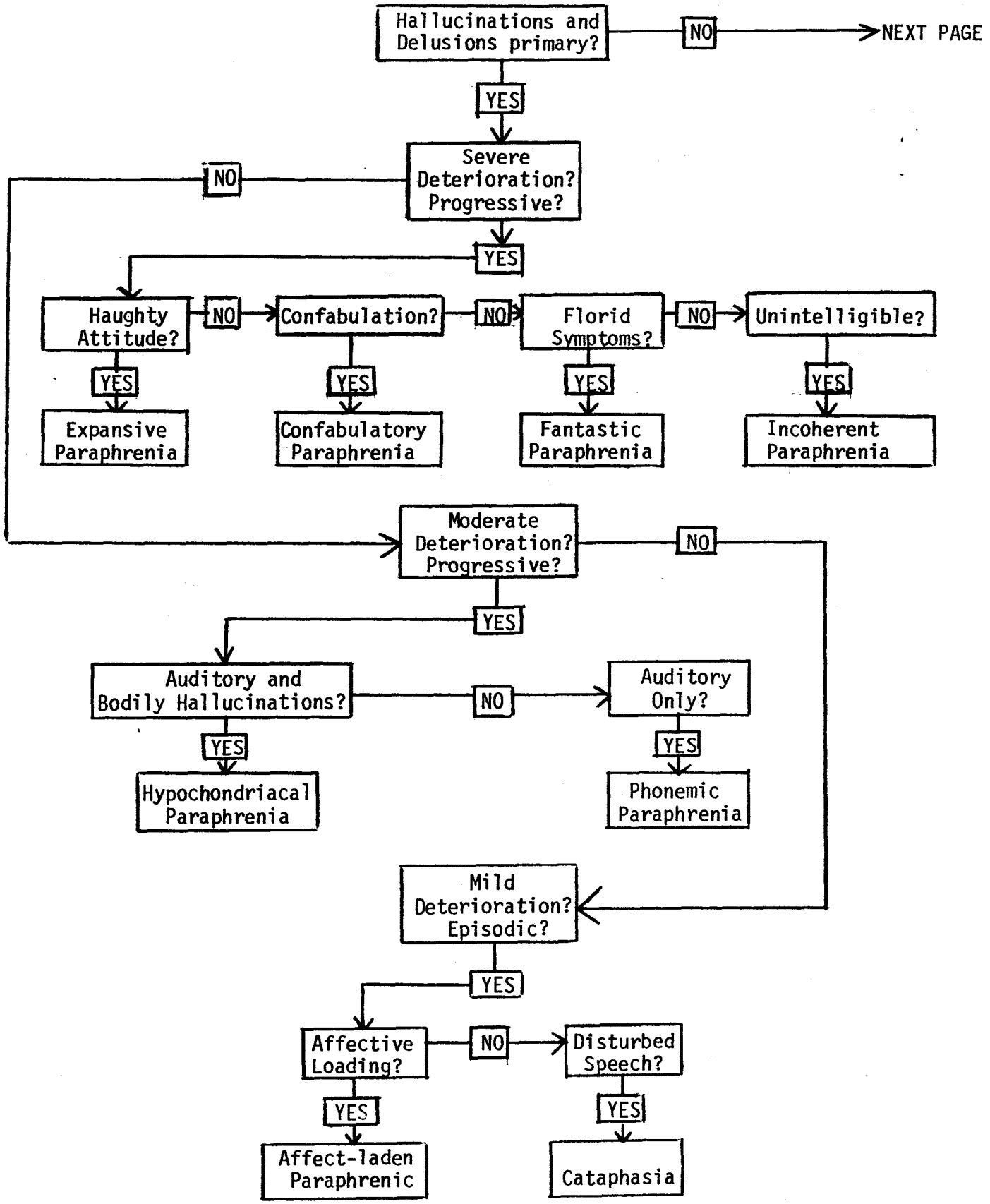
Besides the distinction between systematic and nonsystematic, and the distinction among paranoid, catatonic and hebephrenic, the distinctions severe and mild defects may also be appropriate for the clinical situation. It should be mentioned that many of the non-systematic and mild hebephrenic subtypes represent more personality deviations than the chronic psychotic states. Among

the 990 cases, there were approximately twenty-five percent of them with no overt psychotic symptoms.

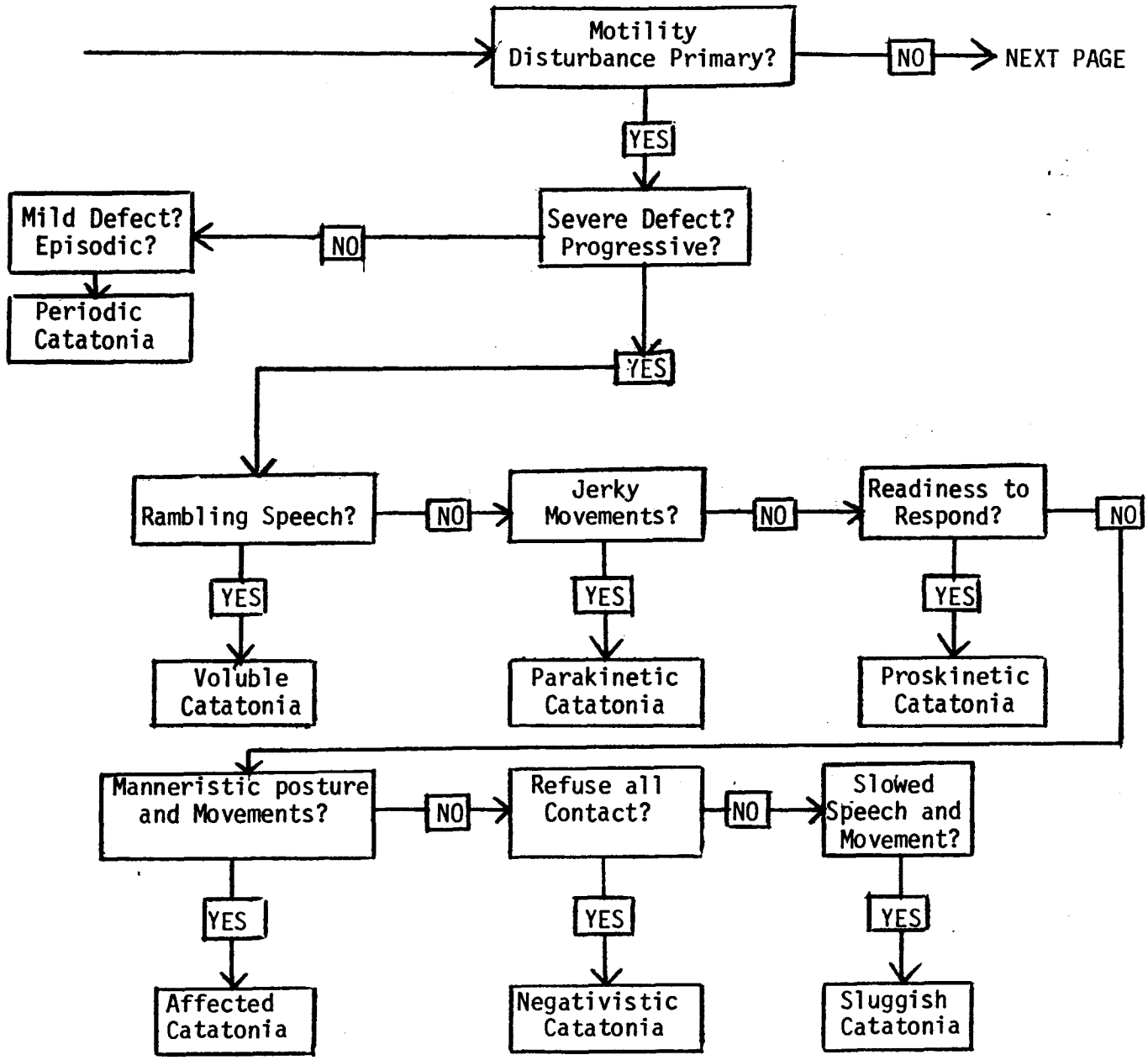
A good case history is usually sufficient for the classification of patients into systematic or non-systematic shcizophrenias. The course of the illness determines this designation. Personal examination is preferable for classifying into subtypes, particularly where motor disturbances are present.

A diagnostic flow chart of the Astrup decision process has been constructed and is presented on the next three pages. For clarity, only key words are given and the rater is cautioned not to rely only on these incomplete designators.

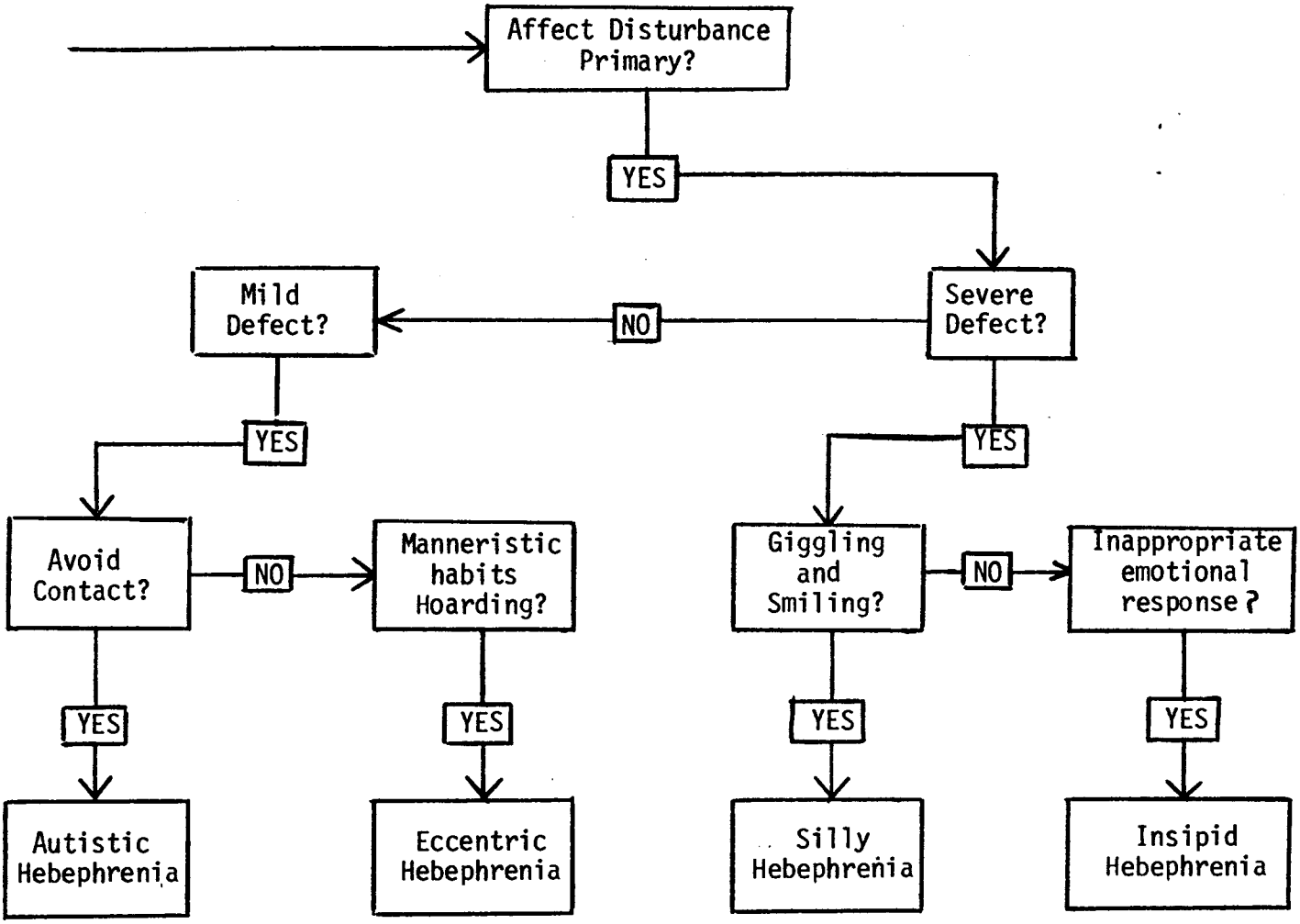
DIAGNOSTIC FLOW CHART



DIAGNOSTIC FLOW CHART (cont.)



DIAGNOSTIC FLOW CHART (cont.)



Completing (Rating) the Leonhard Scale

Most raters complete a scale in one of two ways. The more common procedure is to rate items as the interview progresses - revising judgments, if necessary, as new material emerges. Other raters prefer to wait until the interview is concluded before completing a scale. Either method is acceptable and the choice depends upon personal preference. What matters is that sufficient data be gathered to permit rating of all items. Referring to pages 58 - 59, notice that Scale consists of 68 symptoms and 3 general questions which require responses. Along the right-hand margin are spaces in which the rater makes a check or cross for each symptom which is PRESENT. Two items - Working ability and Response to phenothiazines - require that one of the options be circled (Ⓖ). Two items - Primary disorder and Course of illness - require that the option be checked (Progressive ✓). Multiple responses are permitted on only one item (Primary disorder). Symptoms which are ABSENT; i.e., not present, are left blank. In the event that a particular symptom was not or could not be rated, insert NA (Not ascertained) in the appropriate space.

The order in which symptoms are listed may not follow the sequence in which areas are explored during the interview. The order has been dictated by the scoring scheme and, hopefully, will not create too many problems for the rater. Rating the items and scoring the Scale are two separate procedures. The more important task is rating the items and it is this task to which the rater should first attend. Indeed, some raters prefer to leave the scoring of the Scale to others more versed in the intricacies of the system.

DEPARTMENT OF PSYCHIATRY
VANDERBILT UNIVERSITY

"ONHARD SCALE OF
CHRONIC SCHIZOPHRENIAS

Patient Initials: First | Last

Hospital Number

Period Number

Time Units: Numeric | Unit
1 = Hour 2 = Day 3 = Week 4 = Month
000 = Pretreatment

DATE __/__/__ Mo Day Yr

RATER'S NAME _____

INSTRUCTIONS: Check only the symptoms which are present

Check here	Symptom or Sign	Hypochondriacal	Phonemic	Expansive	Confabulatory	Fantastic	Incoherent	Autistic	Eccentric	Insipid	Silly
	BODILY HALLUCINATIONS										
___	Unpleasant but not detailed	1									
___	Fantastic bodily hallucinations					1					
___	Sexual hallucinations	1									
___	AUDITORY HALLUCINATIONS PRESENT	1	3			1	1				
___	Voices from within self		1								
___	Voices attributed to other persons		1								
___	Voices attributed to animals or objects	1				1					
___	Speaking to voices periodically		1								
___	Speaks to voices continuously						2				
___	Complains about voices	2				1					
___	Complains about content		1								
___	Aversion due to hallucinations						1				
___	Visual hallucinations					1					
___	Scenic hallucinations					1					
___	Mass hallucinations					1					
___	Hallucinatory Excitement						1				1
___	FORMAL THOUGHT DISORDER	1	1	1	2	2	3				
___	Persecutory Delusions	1	1								
___	Grandiose Delusions			2	1	1					
___	Fantastic Delusions				1	2					
___	Misidentifications					1					
___	Confabulations				2	1					
___	Affective Loading	1	1				1				
	MOOD AND AFFECT										
___	Apathetic indifference						1			1	
___	Blunting		1							2	1
___	Blunting with depression	1						1	2		
___	Depressed and irritable (impatient, angry)							1	1		
___	Depressed and querulous (complaining)	1							1		
___	Rejecting all contact							2			
___	Mood Swings					1		1	1	1	
___	Cheerful or contented									1	1
___	Euphoric, expansive			2	1	1					
___	Giggling or smiling										2
	GENERAL BEHAVIOR										
___	Mannerisms, especially hoarding								1		
___	Restlessness										1
___	Spiteful tricks, interfering with others										1
__F __P	Working ability	G	G	F	P	P	P	G	F	F	P
	Subtype Total	12	12	6	8	16	11	6	7	6	8
	Class Total	Paraphrenia 65						Hebephrenia 27			

*Circle one

LEONHARD CLASSIFICATION SCALE OF CHRONIC SCHIZOPHRENIAS

Symptom or Sign	Parakinetic	Voluble	Proskinetic	Sluggish	Affected	Negativistic
DISORDERS OF MOTOR PERFORMANCE						
Ambitendency (ambivalent)						1
Manneristic movements					2	
Jerkiness	1					1
ABNORMAL SPONTANEOUS MOVEMENTS						
Stereotypy (automatic, patterned movements)			1		1	
Parakinesia (choreiform-like movements)	2					
Facial grimaces	1					
Expressionless, stiff face		1		1	1	1
Handling, intertwining, kneading			1			
Impulsive actions, periodic excitement		1		1	1	1
ABNORMALLY INDUCED MOVEMENTS						
Echopraxia (mimics movements)		1	1			
Perseveration (abnormal continuation of movement)			1			
Forced grasping			1			
Mitgehen (responds to slight pressure)			2			
Mitmachen (cooperates despite instruction)			1			
Gegenhalten (opposes, resists movement)					1	
ABNORMAL POSTURES						
Manneristic, stiff posture					1	1
Generalized rigidity					1	
Twisted (body parts twisted in opposite directions)		1				
Haltungsverharren (maintains imposed posture)					1	
ABNORMAL ATTITUDES						
Adversion (turns, leans toward examiner)			1			
Aversion (evades or turns away)		2		2		1
True negativism (actively opposes or resists)						2
SPEECH						
Usually responds when addressed			1			
Usually does not respond when addressed				1		
Jerky, choppy speech	1					
Vorbeireden (talks on and on)		1				1
Muttering and verbigeration (repetitive)			1			
Whispering to auditory hallucinations				1		
Mutism					1	
Partial answers, ambivalence						1
Subtype Total	5	7	11	6	10	10
Class Total	Catatonia 49					

1. Globally, is the patients' illness primarily a disorder of: (check one)

____Thought ____Affect ____Motility

2. Is the course of the illness: Episodic____ Progressive____

3. Rate patient's response to phenothiazines (circle one) G F P NA

Scoring the Leonhard Scale

Under the rubric of systematic schizophrenias, Leonhard has described 16 subtypes - 6 paraphrenias, 4 hebephrenias and 6 catatonias. Leonhard classifies these subtypes on the basis of clusters of symptoms which he considers to be pathognomic to the subtype. Thus, while all symptomatology is rated, not all symptoms rated "present" are scored under all subtypes. Referring again to the Leonhard Scale (pp 58 - 59), note that the subtypes are listed horizontally across the pages - paraphrenic and hebephrenic subtypes on the first page and catatonic subtypes on the second. Under each subtype, a column of numbers can be seen. The total of each column given at the bottom in "fraction" form; e.g., $\overline{12}$ $\overline{12}$ $\overline{6}$. When a number appears at the intersection of subtype and a symptom which is checked "present", that symptom is considered salient for that subtype and, thus, is scored. Example:

	Hypochondriacal	Phonemic	Expansive	Confabulatory	Fantastic	Incoherent
✓ AUDITORY HALLUCINATIONS PRESENT	(1)	(3)			(1)	(1)

Auditory hallucinations have been checked as "present". At each intersection with subtype where a number appears, that number has been circled. Auditory hallucinations, then, are considered salient to hypochondriacal, phonemic, fantastic and incoherent paraphrenias and would, therefore, be scored in tabulating subtype scores. Note that a "3" appears at the intersection of symptom and phonemic subtype. This indicates that the presence of auditory hallucinations are considered essential for the diagnosis of phonemic paraphrenia. Two types of scores are given to symptoms:

Scores of 2 or 3 - This is an essential symptom for the subtype. If not rated "present", a diagnosis of that subtype cannot be made.

Score of 1 - This is an accessory - but not essential - symptom for the subtype.

The item "Working ability" is the exception. The ratings of Good (G), FAir (F) or Poor (P) are distributed across subtypes according to Leonhard and only the levels corresponding to the actual rating are circled and scored "1" for each of the appropriate subtypes.

Example: The rater has judged "Poor (P)" and all P's under the subtypes have been circled for eventual scoring.

G	F	(P)	Working ability . .	G	G	F	(P)	(P)	(P)	G	F	F	(P)		

To score the entire Scale, look for each checked symptom and proceed to circle all numbers appearing in the row to the right of the symptom. Do this for all checked symptoms.

Next proceed to add up the circled numbers in each column; i.e., under each subtype. Encode the total in the space provided at the bottom of each column. This encoded number must not exceed the printed number in that column. This procedure will provide scores for all subtypes in the form of a proportion; i.e., 8/10, 8 symptoms present out of a possible 10.

Class Total refers to the three major classes of schizophrenia. Paraphrenia, Hebephrenia, Catatonia. These totals are calculated by summing the subtype scores within each class; e.g., 5/6 + 3/7 + 2/6 + 3/8 = 13/27, meaning that 13 out of a possible total 27 symptoms have scored in that class. Do this summing for all three classes. The three global items are not included in either subtype or class total scores.

Interpreting the Leonhard Scale

Having obtained scores for each of the 16 subtypes and 3 classes, one can proceed to interpreting the Scale. In general, the higher the proportional subtype score, the greater the probability that the patient should be

classified under that subtype. There are, however, two criteria which must be met for subtype classification in addition to the high proportional score:

1. The essential symptom/s of the subtype; i.e., those with scores greater than one, must be circled as "present". If this condition is not met, the subtype classification cannot be made.
2. For a DEFINITE subtype classification, the sum of the essential symptom/s plus the circled accessory symptoms must yield a proportional score equal or greater than 1/2. If the combination of essential and accessory symptoms yields a proportion less than 1/2, the classification is considered PROBABLE, rather than Definite.

NOTE: The item - Formal Thought Disorder - by itself is not considered essential except for the subtype - Incoherent Paraphrenia. In all other cases, this item must be accompanied by a second essential symptom in order to meet scoring criteria.

Assigning patients to one of the three classes of systematic schizophrenia is usually straight forward. One simply assigns the patient to the class with highest proportional class score.

Example: Patient with the following Class Totals would be classified as a paraphrenic:

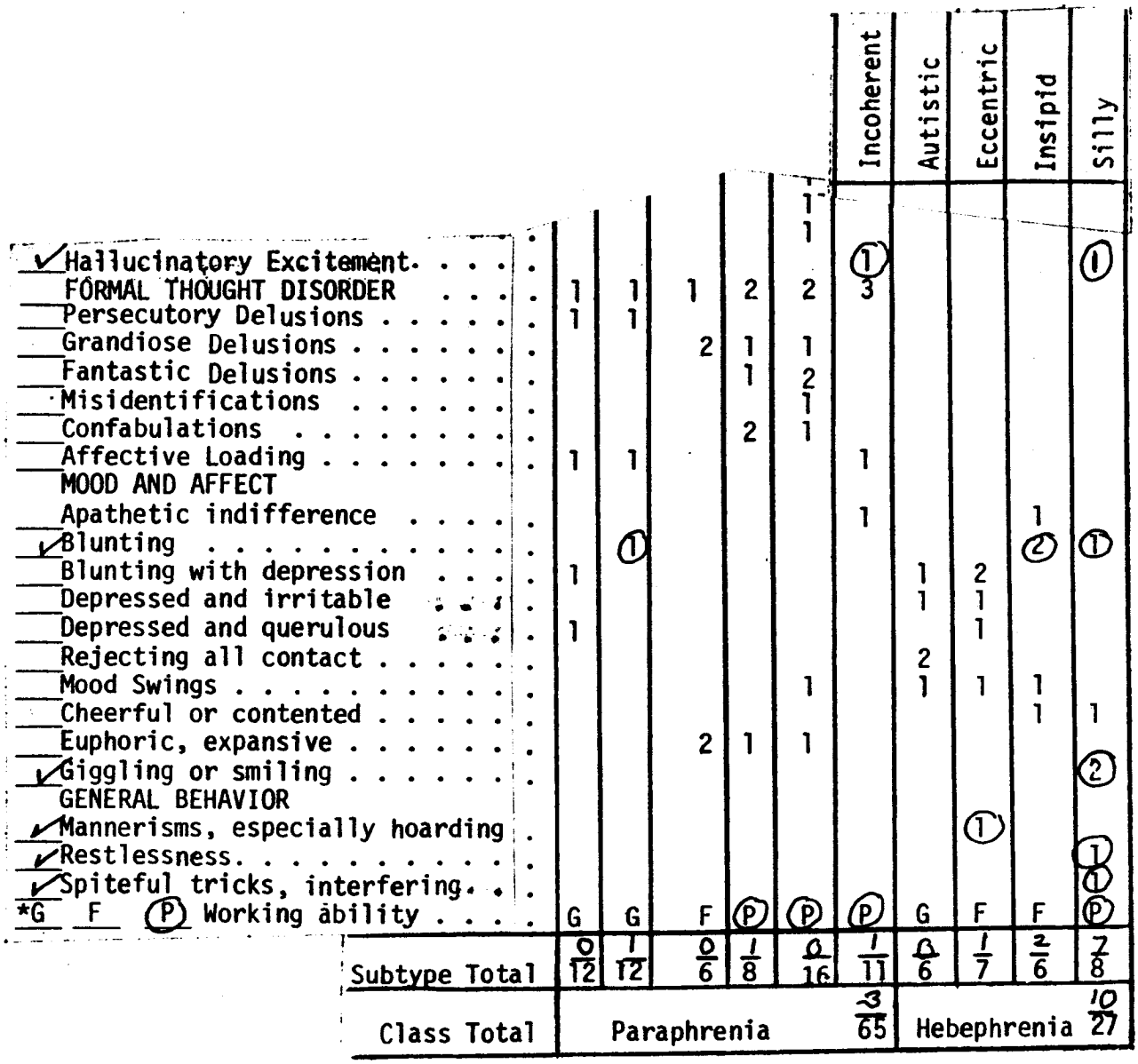
Paraphrenia = 26/65, Hebephrenia = 6/27, Catatonia = 11/49.

Assigning patients to the appropriate subtype, however, is a bit more complicated.

When only one subtype meets the above requirements, the decision is simple. The patient is classified as Definite or Probable under that subtype.

Example:

Here the patient meets the criteria for silly hebephrenia. She has 7 out of the possible 8 symptoms including the essential one - "giggling and smiling". Criteria are not met in any other subtype. Note that the bulk of symptoms fall within the hebephrenic class.



						1						
						1	Incoherent	Autistic	Eccentric	Insipid	Silly	
✓ Hallucinatory Excitement							(1)				(1)	
FORMAL THOUGHT DISORDER	1	1	1	2	2	3						
Persecutory Delusions	1	1										
Grandiose Delusions			2	1	1							
Fantastic Delusions				1	2							
Misidentifications					1							
Confabulations				2	1							
Affective Loading	1	1				1						
MOOD AND AFFECT												
Apathetic indifference						1				1		
✓ Blunting		(1)								(2)	(1)	
Blunting with depression	1						1	2				
Depressed and irritable							1	1				
Depressed and querulous	1							1				
Rejecting all contact							2					
Mood Swings					1		1	1		1		
Cheerful or contented										1	1	
Euphoric, expansive			2	1	1							
✓ Giggling or smiling											(2)	
GENERAL BEHAVIOR												
✓ Mannerisms, especially hoarding									(1)			
✓ Restlessness											1	
✓ Spiteful tricks, interfering											1	
*G F (P) Working ability	G	G	F	(P)	(P)	(P)	(P)	G	F	F	(P)	
Subtype Total	0/12	1/12	0/6	1/8	0/16	1/11	3/65	0/6	1/7	2/6	7/8	10/27
Class Total	Paraphrenia							Hebephrenia				

When two subtype scores under a single class both meet the criteria and are approximately equal in proportion, the patient is classified as a combined-systematic schizophrenic of the dual subtypes.

When none of the subtypes under a single class (the class with the highest class total) meet the criteria and are indistinguishable from one another, the patient represents a mixed form of that class; i.e., mixed paraphrenia, mixed hebephrenia, mixed catatonia. The same designation would hold if more than two subtypes in a single class meet the criteria.

When two subtype scores in different classes meet the criteria and are approximately equal in proportion, the classification is unsystematic schizophrenia. The specific type of unsystematic schizophrenia depends upon which two subtypes are under consideration. The following schema may be used to specify unsystematic type:

Subtype Combination		Unsystematic Schizophrenia
Paraphrenic + Catatonic	=	Cataphasia
Paraphrenic + Hebephrenic	=	Affect-laden Paraphrenia
Catatonic + Hebephrenic	=	Periodic Catatonia

Similarly, if there are no subtypes which meet criteria and the Class Totals are approximately equal in proportions, the classification is unsystematic schizophrenia, unspecified type.

The global question (#1) - Primary disorder - is important for classification in those instances where classes are approximately equal in proportion and no subtypes meet criteria. The second question - Course of illness - can be decisive in that a vital criteria for systematic schizophrenia is a progressive course. Question #3 - Response to Phenothiazines - is an exploratory one which attempts to validate some of Leonhard's findings.

VIII. GLOSSARY OF SYMPTOMS AND SIGNS

Raters must be thoroughly familiar with the following definitions and must rate all symptoms or signs within the contexts given. Symptoms have been defined - in some cases - in a somewhat arbitrary fashion in order to discriminate one from another.

1. Bodily hallucinations - Perception of a bodily sensation, movement or pain without corresponding external stimuli.
2. Unpleasant but not detailed - Bodily hallucination is accompanied by an unpleasant affect (aversion) and the phenomenon is described in vague or imprecise terms.
3. Fantastic bodily sensations - Symptom refers to the content of bodily symptoms. Ex: "Bones in my body are softening". The bodily content distinguishes this symptom from symptom #21 - Fantastic Hallucinations.
4. Sexual hallucinations - Refers to bodily sensations with a sexual content. Ex: "Have a testicle in my head which gives me sexual feelings".
5. Auditory hallucinations - Auditory perception without corresponding external stimuli. If attributes of auditory hallucinations are subsequently rated as "present" (#6 - #17), this symptom should also be rated "present".
6. Voices from within self - Real hallucination. Voice is perceived as within the patient.
7. Voices attributed to other persons - Pseudohallucination. Voices are perceived as outside of the patient. Inquiry must be sufficient to distinguish this symptom from #6 - Voices from within self.

8. Voices attributed to animals or objects - Pseudohallucinations with non-human content. Ex: Dogs, cats, rays, machines. Aliens, God, Satan or other mythological humanoids are considered "human" and should be rated under #7.
9. Speaking to voices periodically - Patient is observed to respond occasionally during the interview to voices by speech or gesture (sign language).
10. Speaking to voices continuously - Patient is preoccupied, responding to voices throughout interview. Necessarily, interviewing patients such as this would be difficult if not impossible. This symptom supersedes #9.
11. Complains about voices - Patient expresses negative feelings about the presence of voices. Ex: "Can't stand these voices".
12. Complains about content - Patient expresses negative feelings about the content of the voices and not necessarily the voice itself. Ex: "Can't stand what these voices are saying". While #11 and #12 are not mutually exclusive, the rater's inquiry should attempt to determine the exact nature of the patients complaints.
13. Aversion due to hallucinations - Refers to the evasion or avoidance of the examiner by the patient (uncooperativeness) presumably, as a consequence of hallucinatory demands. Evidence of hallucinatory involvement in the avoidance must be observed for the rating of "present".
14. Visual hallucinations - Visual perception without corresponding external stimuli. Ex: "See my dead mother standing there".
15. Scenic hallucinations - Visual perception without corresponding external stimuli which represents, graphically, an action, event or episode. These hallucinations are often described as movies by the patient.

16. Mass hallucinations - Visual perception without corresponding stimuli involving large numbers of people. Differs from #15 primarily on the number of people involved.

17. Hallucinatory Excitement - Observable behavioral response to hallucinations - usually intense and dramatic. Differs from simple complaints (#11 and #12) in intensity and, from #13, in that attitude toward examiner may or may not be involved. Ex: Patient screams, writhes on floor, acts as if tortured or in pain.

18. Formal Thought disorder - Presence of conceptual disorganization, unusual content, fragmented or illogical thought processes. If any type of delusions are subsequently rated as present (#19 - 24), this symptom should also be rated "present".

19. Persecutory delusions - False conviction of being threatened by people or environment that can not be corrected by reasoning. Ex: "The FBI wants to kill me".

20. Grandiose delusions - False conviction of one's exaggerated heritage or abilities which can not be corrected by reasoning. Ex: "I'm the King of New Jersey".

21. Fantastic delusions - False conviction of experiencing eccentric or impossible events which can not be corrected by reasoning. Ex: "I'm on the Planet Zetar and everyone else is a transformed lizard".

22. Misidentifications - Attributing false identities to persons - not animals or objects - as a consequence of delusions. Not to be confused with disorientation which is a failure or inability to identify. Ex: "You're not the doctor, you're Jack the Ripper".

23. Confabulations - False description of events - usually in the past - embellished with false or improbable details. Analogous to the Munchauson syndrome.

24. Affective loading - Distinct emotional component to the delusionary system.

25. Apathetic indifference - A complete lack of perceptible emotional or affective response. If this symptom is rated present, #26 - #29 and #31 - #34 must be rated "absent".

26. Blunting - A constriction or reduction in emotional response or involvement.

27. Blunting with depression - Constricted or reduced emotional response with perceptible depressive elements. This symptom and #26 are mutually exclusive - only one may be rated "present" in any single assessment.

28. Depressed and irritable - Depressive elements present along with irritability, impatience or annoyance.

29. Depressed and querulous - Depressive elements present along with querulousness, complaining and whining. This symptom and #28 are mutually exclusive and only one or the other may be rated "present" at any single assessment.

30. Rejecting all contact - Patient refuses to interact with examiner either by speech or gesture. If this symptom is present, other symptoms which can only be rated on the basis of interchange between examiner and patient must be rated "absent".

31. Mood swings - Perceptible alternations of affect from one pole to another; e.g., sad to glad.

32. Cheerful or contented - Pleasant emotional response or attitude; satisfaction with status quo. Mild elation.

33. Euphoric, expansive - Marked elation with concurrent content - whether reasonable or not. This symptom supersedes #32 and the two should not be simultaneously rated "present".

34. Giggling or smiling - Inane, purposeless motoric expression - without concurrent content or appropriate context. This symptom supersedes both #32 and #33 and neither should be rated "present" when this symptom is present.

35. Mannerisms, especially hoarding - Stylized and peculiar habits or patterns of behaviors; e.g., hoarding used paper cups or bits of cloth and paper; ritualistic eating or sleeping patterns. Bizarre dress or costumes should be rated here.

36. Restlessness - Constant, aimless movement; e.g., pacing, wringing of hands, unable to sit still. Gives the impression that its purpose is the discharge of energy.

37. Spiteful tricks; interferring with others - Childish pranks with a degree of maliciousness. Breaking into conversations or hindering the activities of others.

38. Working ability - Productive activity by the patient rated as follows:

    Good (G) = Performs without supervision

    Fair (F) = Performs with supervision

    Poor (P) = Unable to perform

39. Ambitendency (motoric) - Hesitant, ambivalent movements which hinder the completion of a voluntary action. Ex: Extending and retracting hand when asked to shake hands.

40. Manneristic movements - Peculiar or stylized voluntary movements; e.g., affected gait, elaborate and embellished movements before sitting or rising.

41. Jerkiness - Lack of smoothness to voluntary movements. Choppy, awkward and uncoordinated actions. Ex: Robot-like walking, Frankenstein's monster.

42. Stereotypy - Repetitive non goal-directed voluntary actions carried out in

a uniform or patterned manner. Ex: Making right-angle turns, always saluting when answering.

43. Parakinesis - Inappropriate and purposeless spontaneous movements; usually choreiform - like in quality. This symptom differs from #36 (Restlessness) in its lack of purpose.

44. Facial grimaces - Grotesque or unusual spontaneous expressions which serve no apparent purpose.

45. Expressionless, stiff face - Blank and/or unchanging expression. Mask-like face. This symptom and #44 are mutually exclusive and should not be simultaneously rated "present".

46. Handling, intertwining, kneading - Patterned spontaneous movements of hands, kneading hands or clothes, purposeless manipulations of clothes or other objects.

47. Impulsive actions, periodic excitement - Abrupt or explosive spontaneous actions; sudden hyperactivity. Aggressive outbursts should be rated here.

48. Echopraxia - Spontaneous imitation or mimicry of another's actions or movements.

49. Perseveration - Abnormal continuation of induced movement beyond useful point. Repetition or persistence of movements when inappropriate to situation.

50. Forced grasping - Repeated grasping of examiner's hand when proferred despite instructions not to do so. A form of *Mitmachen* but should be rated separately.

51. *Mitgehen* - Overresponsiveness to induced movement. Patient responds positively to the slightest pressure; i.e., moves body or limb in the induced direction or plane.

52. *Mitmachen* - Responds to induced movement despite contrary instructions. Refers to responses other than #50 - forced grasping. Raters should let

an interval of time pass between instructions not to conform and induced movement.

53. *Gegenhalten* - Equally applied opposition or resistance to attempted induction of movement.

54. Manneristic, stiff posture - Unusual or stylized posture. Ex: Affected or bizarre stance, stork-like (one leg) stance. Differs from #35 - mannerisms which refers to habits and from #40 - manneristic movements which refers to voluntary actions.

55. Generalized rigidity - Refers to rigid, stiff posture. Exaggerated stance of attention. Ex: "Rigor mortis" pose.

56. Twisted posture - Refers specifically to an abnormal torsion in posture; i.e., one part of body is twisted in the opposite direction from the other.

57. *Haltungsverharren* - Perservation of an unusual or bizarre posture for an abnormally long period of time. Limbs on body may slowly return to rest, however.

58. Adversion - Turning or leaning toward examiner in an attitude of readiness to respond. Showing of interest in examiner and interview with or without coherent interaction.

59. Aversion - Evasion or avoidance of the examiner and the interview situation. Turning body or head away from examiner. No show of interest.

60. True negativism - Active opposition or resistance to examiner or interview; e.g., will not come to interview room, openly expresses refusal to cooperate. This symptom supersedes #59 and is mutually exclusive with #58; i.e., the two cannot be simultaneously rated "present".

61. Usually responds when addressed - Patient most always gives a verbal response to examiner's questions. Response need not necessarily be logical or coherent. Verbal cooperativeness.

62. Usually does not respond when addressed - Patient refuses to respond most of the time. Verbal uncooperativeness. Patient may answer "no", "don't know", "won't say" or shake head and still be rated here.

63. Jerky, choppy speech - Rhythm or cadence of speech is lacking or noticable reduced. Pauses and phrasing are not synchronized. Rate pressured speech; i.e., accelerated or intensified speech, here.

64. *Vorbeireden* - Over-extended or elaborated responses containing irrelevant or tangential material. Rambling on and on. Differs from #63 in that the content is disturbed not the rhythm or cadence.

65. Muttering or verbigeration - A type of stereotypy. Repetition of words, phrases or sentences. Also called cataphasia. Patient may respond with same word or phrase to all questions. Muttering refers to incomprehensibility of what is said. Neologisms may be present. This symptom and #64 are mutually exclusive and should not be simultaneously rated "present".

66. Whispering to auditory hallucinations - Refers to inaudible or incomprehensible muttering directed toward voices. Differs from #9 and #10 (speaking to voices) in that examiner has difficulty in understanding what patient is whispering. Therefore, this symptom and #9 and #10 are mutually exclusive.

67. Mutism - Total absence of verbal response or speech of any kind. If this symptom is rated "present", #61 - #66 must be rated "absent".

68. Partial answers - Hesitant, ambivalent verbal responses reflecting the patients uncertainty regarding his willingness to respond. Unfinished sentences or phrases, retractions or denials of verbal statements are characteristic here.

General Questions

1. Primary disorder - A global judgment of the major aspect of the disorder. One response is preferred. However, when the clear dominance of one of

the aspects cannot be determined, multiple responses (checks) are permitted.

2. Course of illness - A dichotomous judgment of the course of illness. "Episodic" is defined as one or more short episodes of psychotic exacerbation requiring hospitalization followed by relatively long intervals of remission; i.e., more time spent out of hospital than in. Ex: Patient was hospitalized for a few months in 1961, a few months in 1973 and again in 1979 for a month or two. "Progressive" is defined as a "down hill" course of the illness in which periods of hospitalization become longer, more frequent and more closely spaced; i.e., more time in the hospital than out. Ex: Patient was hospitalized for a few months in 1972, half a year in 1973, 2 years in 1974 and current hospitalization in 1979 is over 2 years duration.
3. Response to phenothiazines - A global judgment of clinical response to a single class of neuroleptics - phenothiazines. "Good" is defined as a satisfactory and significant reduction in symptomatology. "Fair" is defined as a partial reduction. "Poor" is defined as unsatisfactory or equivocal response to treatment.

IX. SUMMARY OF SCHIZOPHRENIC SYMPTOMATOLOGY

1. UNSYSTEMATIC SCHIZOPHRENIAS

Cardinal Elements

a. Wide range of symptoms makes specific classification doubtful.

b. Fluctuating, episodic course.

c. Generally, better preserved affect and less personality deterioration.

A. PERIODIC CATATONIA

Cardinal Symptoms - Bipolar, i.e., both hyperkinetic and akinetic traits present. Hyperkinetics have better prognosis.

Accessory Symptoms - Stiff jerky movements. Grimacing. Rigidity in posture and facial expression. Stereotypy in movements. Disturbances in both thought and affect. Impulsivity in movements and affect.

B. CATAPHASIA

Cardinal Symptoms - Breakdown of thought and speech. Two forms--excited and inhibited. Contrast between disturbances of speech and thought and ability to work and behave rationally is striking.

Accessory Symptoms - Excited = Confused compulsive speech, yet affectively preserved and well-behaved. Logical blunders, and confabulations. Hallucinations and delusions present but not dominant. Inhibited = Reduced speech or mutism. Decreased motor activity. Perplexity. Stare fixedly at examiner instead of answering.

C. AFFECT-LADEN PARAPHRENIA

Cardinal Symptoms - Affective loading to delusions. Auditory and bodily hallucinations. Fluctuations in affect.

Accessory Symptoms - In later stages, anxiety replaced by irritability. Complaints of persecution. Grandiosity, misidentification, errors of memory - all anchored in affect. Delusions less systematized as illness progresses.

2. SYSTEMATIC SCHIZOPHRENIAS

Cardinal Elements -

a. Circumscribed group of symptoms with no marked changes once the syndrome is established.

b. Progressive, rather than episodic, course.

A. Systematic Catatonias

Cardinal elements

a. Motility disturbance predominant.

b. Severe defect in all subtypes.

c. Order of severity (from least to most severe) - parakinetic, voluble (speech-prompt), proskinetic, sluggish (speech-inactive), affected (manneristic), negativistic.

Parakinetic - * Jerky, awkward voluntary movements resembling choreiform movements. Grimacing. Choppy speech, short phrases and sentences.

Voluble (Speech-prompt) - * Rambling on and on in answer to questions; *Vorbeireden.* * Maintenance of imposed posture; *Haltungsverharren.* Echopraxia; mimicing of movements. Expressionless face. Stiff movements. Periodic excitement.

Proskinetic - * Automatic movements. * Respond to slightest imposed pressure; *Mitgehen.* * Forced grasping even when told not to. * Kneading and intertwining of fingers and clothes. Murmuring and verbigerations, i.e., stereotyped repetition of phrases.

(* = Cardinal or essential symptom)

Sluggish (Speech-inactive) - * Preoccupied by phonemes. * Avoid examiner; give no responses. Periodic excitement. Poor self-care.

Affected (Manneristic) _ * Manneristic movements progressing to rigidity. Stereotypy. Impulsive actions. Oppositional resistance to imposed posture; *Gegenhalten*. Preservation of imposed posture. Whispering to phonemes.

Negativistic - * Resists all contact but some ambivalence. * Twisted posture; upper body twisted in opposite direction from lower. Jerky movements. Impulsive actions.

B. Systematic Hebephrenias

Cardinal Elements

a. Affect disturbance predominent.

b. Few symptoms; poor prognoses.

c. Order of severity (less to most severly disturbed) - autistic, eccentric, insipid (apathetic), silly.

Hebephrenic subtypes

Autistic - * Rejects all contact. Avoidance. Depressed and irritable. Good working ability. Blunted affect. Stiff facial expression.

Eccentric - * Depressed and irritable. * Depressed and querulous; repeated complaining. Flattened affect. Mannerisms; e.g., hoarding. Fair working ability.

Insipid (Apathetic) - * Marked flattened affect; indifference. Periods of irritability. Hallucinatory excitement. Cheerful or contented. Fair to poor working ability.

Silly - * Giggling and smiling. * Blunted affect. Contented and cheerful. Spiteful tricks. "Happy-go-lucky" manner. Restless; interfering with others.

C. Systematic Paraphrenias

Cardinal Elements

a. Thought disturbance predominant.

b. Progressive course.

c. Order of severity (from least to most severe) - hypochondriacal, phonemic, expansive, confabulatory, fantastic, incoherent.

Hypochondriacal - * Unpleasant voices and bodily hallucinations but poorly articulated. * Moderate thought disorder. * Blunted affect with depression. * Complaining about voices and their content. Attribute phonemes to machines and rays rather than people. Good working ability.

Phonemic - * Auditory hallucinations preoccupy patient. * Responds to phonemes. * Moderate Thought disorder. Phonemes attributed to self and/or other persons. Complains about content; moderate persecutory quality. Blunted affect. Good working ability.

Expansive - * Grandiose delusions. * Euphoric mood. * Marked thought disorder. *Haughty attitude. Fair to poor working ability.

Canfabulatory - * Fantastic confabulations. * Marked thought disorder. Euphoric mood. Poor working ability.

Fantastic - * All varieties of hallucinations and delusions-bodily visual, mass, scenic. * Marked thought disorder. Misidentifications. Euphoric mood. Poor working ability.

Incoherent - * Muttering and whispering to voices. * Severe thought disorder. * Difficult to understand. No interest or initiative. Poor self care and no working ability.

X. LEONHARD TEST FOR FORMAL THOUGHT DISORDER

A. CONCRETE DIFFERENCES

What is the difference between a _____ and a _____?

1. box/basket _____
2. stairs/ladder _____
3. brook/canal _____
4. mountain/mountain range _____
5. tree/bush _____
6. child/dwarf _____

B. ABSTRACT DIFFERENCES

What is the difference between a _____ and a _____?

7. error/lie _____
8. greedy/thrifty _____
9. lend/give _____

C. PRODUCTIVITY

Make a sentence out of these 3 words:

10. child/meadow/flowers _____
11. field/hunter/rabbit _____
12. sun/curtain/room _____
13. rider/horse/ditch _____
14. car/curve/tree _____
15. peasant/harvest/rain _____

D. PROVERBS

What does this saying mean?

16. The apple does not fall far from the tree._____

_____

17. A bird in the hand is worth two in the bush._____

_____

18. What you don't know won't hurt you._____

_____

19. All that glitters is not gold._____

_____

20. Necessity breaks iron. _____

_____

21. There is no rose without thorns._____

_____

Leonhard's Test of Formal Thought Disorder consists of four major sections:

A. Concrete Concepts - the ability to explain differences between two similar objects.

B. Abstract Concepts - the ability to explain differences between two similar actions or motives.

C. Sentence Construction - the ability to construct a logical sentence from three given words.

D. Proverbs - the ability to explain the meaning of a common maxim.

The 21 items of Leonhard's test are of a familiar type which have been employed in any number of similar evaluations of thought disorder. The test is brief and easy to administer, although a cooperative and verbally responsive patient is required. The examiner simply asked the questions and records the patient's responses on the lines provided. When a partial or unclear response is given, the examiner should encourage the patient to explain further.

While Leonhard has not provided a scoring system for the test, examiners can refer to similar tests for an applicable scoring schema; e.g., Gorham's Proverb Test, and the WAIS Similarities subtest. In general, a three-level gradient of responses are employed in tests of this type:

0 = No response; an illogical or bizarre response; a response which basically repeats the question or denies the differance between the items.

1 = A response which is partially correct; a response which is limited in its generalization; i.e., too literal, or contains minor or tangential elements of the concept.

2 = An abstract response; a response which contains the basic or fundamental concept or generalization, a higher order interpretation.

Examples:

Mountain/Mountain range

0 = "They're the same". "A mountain is the range where you're home on".

1 = "A mountain is tall and a range is wide".

2 = "A mountain is a single rocky high place, and a range is a group of mountains".

Error/Lie

0 = "An error is a lie". "To lie down in error is a sin in God's eyes".

1 = "An error is a mistake and a lie is a wrong mistake (immoral)".

2 = "An error is an unintentional mistake and a lie is an intentional untruth".

Farmer/harvest/rain

0 = "The farmer harvests the rain".

1 = "It rained during the harvest".

An apple does not fall far from the tree.

0 = "'Cause Newton found the gravity of the apple tree".

1 = "An apple will usually fall straight down and not roll too far".

2 = "A child will reflect his upbringing".

Using a system of this sort, total scores would range from 0 to 42. A precise "cut-off score" is not available, although one would guess it would range somewhere between 20 and 25. Qualitative interpretation of test, however, is quite possible and is clinically as important as a quantitive measure might be.

XI. DISTRIBUTION OF CHRONIC SCHIZOPHRENIC DIAGNOSES

	Leonhard (~~906~~ 823)		Astrup (986)		
	No	%	No	%	
UNSYSTEMATIC SCHIZOPHRENIAS	257	28.4	445	45.1	
Periodic Catatonia	87	9.6	96	9.7	90
Cataphasia	76	8.4	119	12.1	89
Affect-Laden Paraphrenia	94	10.4	230	23.5	210
SIMPLE SYSTEMATIC SCHIZOPHRENIAS	407	44.9	541	54.9	
Catatonic Forms	144	15.9	67	6.8	
Manneristic	33	3.6	16	1.6	14
Parakinetic	24	2.6	10	1.0	11
Negativistic	17	1.8	11	1.1	11
Proskinetic	23	2.5	7	0.7	7
Sluggish (speech inactive)	22	2.4	13	1.3	20
Voluble (speech-prompt)	25	2.8	10	1.0	11
Hebephrenic Forms	90	9.9	23.5	23.8	
Silly	19	2.1	28	2.8	27
Eccentric	26	2.9	118	11.9	91
Insipid (shallow)	19	2.1	54	5.5	54
Autistic	26	2.9	35	3.5	34
Paraphrenic Forms	173	19.1	239	24.2	
Fantastic	24	2.6	38	3.9	36
Confabulatory	31	3.4	14	1.4	11
Hypochondriacal	25	2.8	61	6.2	60
Phonemic	37	4.1	90	9.1	87
Expansive	29	3.2	26	2.6	21
Incoherent	27	3.0	10	1.0	11
COMBINED SYSTEMATIC SCHIZOPHRENIAS	~~242~~ 123	~~26.7~~	___	___	
Combined Catatonias	~~140~~ 69	~~15.5~~	___	___	
Combined Hebephrenias	27	3.0	___	___	
Combined Paraphrenias	75	8.3	___	___	

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Comparing the Leonhard and Astrup diagnostic distributions, it can be seen that Astrup classifies approximately 55% of his population as "systematic" - some 10% higher than Leonhard. Since Astrup rejects the diagnostic categories of combined systematic schizophrenias it may be presumed that he has reclassified such cases primarily under unsystematic schizophrenias.

Within the simple systematic schizophrenias, more than twice as many patients are classified as hebephrenias under Astrup as compared to Leonhard, and approximately half of those so classified are subtyped as eccentric hebephrenia.

Within the systematic paraphrenias, the hypochondriacal and phonemic subtypes constitute approximately 60% of all paraphrenias under Astrup's classification; while, under Leonhard, these two subtypes account for only 37%.

A little less than half as many patients are classified as systematic catatonias by Astrup as compared to Leonhard. The distribution of catatonic subtypes, however, is reasonably consistent between the two groups.