

SCHIZOPHRENIC SYMPTOMS AND CEREBRAL PATHOLOGY

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THE illness which was first described by Kraepelin and which he called dementia praecox was more correctly designated as a *Zerfallskrankheit* (disintegrative illness) by Eugen Bleuler, who called the illness schizophrenia. In this disease, or rather group of diseases, not only does one find characteristic symptoms and symptoms which occur in other functional psychoses, but, if suitable methods of examination are employed, symptoms which are found in gross brain diseases, especially those associated with focal lesions, are also elicited. Apart from this, many other symptoms acquire a new aspect when viewed from the standpoint of neuropathology. This may justify our attempt to consider all schizophrenic symptomatology from the point of view of neuropathology. I attempted to do this in my "Report on Cerebral Pathology and its Importance for Neurology and Psychiatry" which I delivered 21 years ago at the annual meeting of the Association of German Neurologists and Psychiatrists at Frankfort-on-Main. Not much space was devoted to the problem of schizophrenia in this report. However, since that time more neuropathological knowledge has been acquired as a result of the Second World War, and this has added to the not inconsiderable knowledge of neuropathology which we already had in 1936 as a result of the First World War. The increasing number of brain injuries due to road accidents has also increased our knowledge of neuropathology. New approaches to the schizophrenic syndromes have been made possible by this growth of our knowledge of the effects of brain injury. Apart from this, I was able, in collaboration with Professor Leonhard and others, to finish a few years ago the clinical follow-up studies on schizophrenia which I began in 1936. In this work we encountered a large number of schizophrenic symptoms which had neurological characteristics.

In a Senckenberg Lecture in 1947, I made a review of "Progress in Psychiatry" as I had experienced it in the previous fifty years. On this occasion I felt justified in saying that intellectual processes of deterioration, which are related to the cortex and to various psychiatric brain stem disorders, occur in schizophrenia and that these changes are comparable with those of Huntington's Chorea and Alzheimer's Disease. Both kinds of process act together and produce the affective, psychomotor, delusional, speech confused and thought confused forms of illness which belong to the different groups of hebephrenic, catatonic, paranoid, and confused schizophrenia.

These groups and their subforms can be arranged so that the forms which come first are those which have symptoms with marked neurological characteristics. On the left one can place the forms in which cortical symptoms predominate, while on the right are those forms which are apparently caused by brain stem disorders. By brain stem I mean all the forebrain ganglia, the diencephalon, the mesencephalon and the metencephalon.

This review is confined to the basic forms of schizophrenic illness. Most of these are simple forms, have the same features throughout the course of the illness, progress only gradually and run a course which is that of a "psychiatric system illness". The combined forms which are also systematic will not be dealt with here. Those forms which have been worked out by Leonhard and which develop unsystematically and extensively during the course of the illness will also not be discussed with the exception of those which begin with a characteristic clinical picture. These last forms are distinguished from the systematic forms in our scheme by a punctate underlining.

In order to prevent misunderstanding it must be pointed out that I consider that the general relation between mental phenomena and cerebral processes is merely one of correspondence. So that I am very far from identifying one with the other or from making the psyche into something material. Here I would like to refer to my article on "Brain and Psyche" (13) and earlier statements of a similar kind. When I talk of mental phenomena and processes I am referring to their general nature and not to the special contents in an individual case. It does not matter whether the patient hears the hallucinatory voices of his wife or of his former mistress nor if some current hostility or some past unresolved psychological conflict, of which he is not fully aware, is playing a part in his delusion. The content of a particular stereotypy may be explained as derived from some experience of the patient but not the stereotyped behaviour *per se*.

I. CONFUSED SCHIZOPHRENIAS

1. A patient with this sub-form of schizophrenia (which corresponds with Kraepelin's *Sprachverwirrtheit* (speech-confusion)) described the "broken window-pane picture" (from the Binet-Bobertag collection), which shows a coloured picture of a boy who has smashed a window and a man who gets hold of another boy by mistake, as follows: "Das Bild, das etwas Farbeauftrag braun, gelb, grün, blau, rosa und violett zeigt, ist mit Teefarbenausführung zu bezeichnende Schneewirtschaft. Sein Zeitstil ist das verlassene Mittelalter. Dem Bilde traue ich eine Aufstellung zu and sehe, dass der grünste Junge bereits die Scheibe zerschmettert haben darf." The approximate translation would be: "The picture, which shows some application of colour brown, yellow, green, blue, rose and violet, is with tea colour performance to be designated snow household. Its style is deserted Mediaeval. I credit the picture with a setting-up and see that the greenest boy already may have broken the pane." The second part of the first sentence "ist mit Teefarbenausführung zu bezeichnende Schneewirtschaft" (is with teacolour application to be designated snow household), is paragrammatical. Equally paragrammatical is "haben darf" (may have) instead of "haben dürfte" (might have). Verbal paraphasias are to be found in "das verlassene" (deserted) instead of "das vergangene" (past) and "traue ich . . . zu" (I credit) instead of "vermute ich" (I suppose). "Aufstellung" is agrammatical and stands for: "Ich vermute, dass—eine Bretterwand—aufgestellt ist." (I suppose that—a partition of boards—has been set up.) "der grünste Junge" (the greenest boy) is a faulty word derivation and in the same way the new word construction "Teefarbenausführung" (tea colour performance) and "Schneewirtschaft" (snow household) are just as incorrect. Another patient was looking for words, trying to correct her faulty speech, and finally said that she noticed her own lack of speech understanding, "Ich fühle das auch, dass

die Aussprache gegenseitig schwer gegeben ist.” (I also feel that the discussion is made mutually with difficulty.) This is again a paragrammatical misconstruction.

Understanding and linguistic formulation of abstract and insignificant thoughts, which are themselves markedly connected with speech, are affected the most. One patient had to explain the proverb “Morgenstund hat Gold im Mund”. (The morning hour has gold in its mouth, i.e. the early bird catches the worm.) Answer: “Das ist die Taschenuhr . . . ganz sicher . . . vier Gedanken gestrige . . . also vier Uhr.” (This is the watch . . . quite sure . . . four thoughts yesterday . . . thus four o’clock.) Only parts of the proverb have been understood, and the sense of it is formulated in a faulty way. Perhaps the patient wanted to say “This means getting up early . . . at four o’clock, as one has planned yesterday . . . therefore one needs the watch.” (Das bedeutet früh aufstehen . . . um 4 Uhr, wie man sich gestern vorgenommen hat . . . dazu braucht man die Taschenuhr.)

We are therefore dealing with *sensory aphasic impairments* similar to those found in focal brain lesions of the *left temporal lobe*. The only difference is the involvement in schizophrenia of higher levels of speech which are responsible for word derivations, word constructions, the formation of sentences, and for the abstract meaning of speech conceptions—i.e. the thinking based on speech. On the other hand in focal brain lesions the lower levels of speech, i.e. the sounds, words (sound sequences) and names, are disturbed.

Many years ago, in systematic investigations, my former associate Fleischhacker (4) demonstrated finer disorders of speech understanding in schizophrenics, and Benary and Pittrich (20) were able to detect disorders of speech-based thought in wounded soldiers of the two World Wars.

Vogt and Beheim (22) found cell degenerations, especially atrophic cells (Schwundzellen), widespread in the cerebral cortex of schizophrenics, also in the temporal lobe.

2. In *Paralogical Schizophrenia* the paralogical impairment of comprehending thought is a leading symptom. One of our patients did not recognize the picture of the “Fensterpromenade” (a man greeting two ladies at a window and stumbling over a boy whom he has knocked over), and produced the following paralogical mistakes in thought: “The boy who has fallen down was perplexed at the arriving visitor, or he is ill and has suffered a fit. According to his mien the arriving gentleman is asking for help for the fallen child.”

This thought disorder is very close to an *ideational agnosia* as described by Liepmann in focal lesions of the occipital lobe. In defining the concept of a locomotive another patient referred only to a part of this image, “A locomotive is a black chimney”. One patient discriminated a child from a dwarf in the following way, “A child is a crazy dwarf, a dwarf is the spirit of the child”. Difference is mistaken here for similarity, and the contents of the answer are mixed-up concepts. Maybe he had in his mind: The dwarf is different from the child in that he is “crazy” (i.e. malformed), but has as normal a spirit as the child.

When asked about the meaning of the proverb, “Hunger ist der beste Koch” (Hunger is the best cook) he said, “When you are hungry you prepare the meal yourself”. Obviously putting himself into the situation of the proverb the patient took as the best cook the man who always knows how

to look after himself, according to the proverb "Selbst ist der Mann" (One does things best oneself). This shows a mingling of concepts. The same patient talked one day about water from a "Wiesenbach" (meadow-stream) and continued, ". . . aus dem Jesubach, dem Bach, der über Jesus geschrieben hat" (. . . from the Jesu-Bach, the Bach, who has written about Jesus). He meant probably Johann Sebastian Bach. "Jesubach" is a new concept formation caused by this thought disorder. Some paralogias seem to be symbolic. Thus one of my Erlangen patients said, "Erlangen is botanical". Why? "Because it has a wreath made of oak and laurel leaves in its coat-of-arms." Another time he pointed to the walls of the living room and stated, "The walls are christianly whitewashed". The pattern on the walls resembled crosses. In this case comparisons became equivalents.

Faulty actions may be the expression of a parapraxia which is related to paralogia: the musically endowed patient with the ambiguous concept of "Bach" poured hot oil into his ears in order to destroy his hearing and to become a famous composer like Beethoven. He also went down one night to the street dressed only in a shirt, because he said everyone was dead and the dead would be buried only in a shirt.

3. In *Incoherent Schizophrenia* in addition to paralogical and paraphrased disturbances there are *incoherences of the stream of thought* associated with a disorder of attention, a slight excitation of thought and phonemes. A patient said, when asked where he was, "Mental hospital, can not be a foundation, as one said . . . house, stones . . . my father . . . family memory, the house where we lived in has also the inscription Karl . . . there I was not ill, Theo is an old warrior again . . . he has suffered a competition in family affairs . . . six, nine, ten families as it were . . . my experiences of childhood has been brought up with fifteen children . . . doctor, no twisting of limbs! . . ."

Quite a few *new word constructions* (family memory) and *paragrammatisms* (my experiences . . . has been brought up) are interspersed in these mental jumps.

In another example paralogias are mingled with the incoherent stream of thought. A patient had to explain the proverb "Der Apfel fällt nicht weit vom Stamm" (The apple does not fall far from the tree). He said, "Das sind Abfälle. Es heisst mit einem Wort unser Stammbaum. Ich sehe mir eine Kiefer an und sehe den Oberkiefer und den Unterkiefer, dann weiss ich, wie der Kiefernstamm aussieht." (These are fallings away. It is called by one word—our family tree. I look at a pine tree and see the "upper pine" (=upper jaw) and the "lower pine" (=lower jaw), then I know what the pine tree-trunk looks like.) The "Kiefer" (pine) as a tree and the "Kiefer" (jaw) as part of the body ("Kiefer" means in German "pine" as well as "jaw") are exchanged, upper jaw and lower jaw appear as father and son. The apple falling off (abfallend) the tree becomes the "Abfall" (transferred meaning: garbage).

Probably the incoherent thought disorder may be referred to a *dysfunction of the diencephalon* in accordance with observations made in brain injuries and cerebro-vascular lesions.

II. PARANOID SCHIZOPHRENIAS

In the paranoid schizophrenias disorders of speech and the above-mentioned impairments of comprehending thought are only slight, whereas a

similar thought disorder concerned with the spheres of *body, personality, social community and cosmic-religious relations* is prominent.

1. A woman with *Progressive Somatopsychosis* complained that her bowels were taken out, her blood burnt, her uterus completely filled, her breasts were as heavy as millstones and her head had disappeared. These strange ideas were supported by bodily sensations. So she misidentified and misinterpreted her somatosensory perceptions and by means of a paralogical disturbance of thought she acquired senseless ideas about the state of her body.
2. A man who fell ill with *Progressive Autopsychosis*, when he was in the army, felt himself mistaken for other men, thought he was given other names, and finally was in doubt of his own identity. Discharged from the army he travelled a long way to his native town in order to find his self. This means he did not recognize himself as the person he was with memories of his childhood, with the experiences of his apprenticeship, his business and his marriage. In a paralogical way his thinking about himself went astray into the ideas of being other people. So he took himself for a corporal, later on for a general, which did not prevent him from doing good work in ladies' tailoring.

A woman with auto- and somatopsychic combined disorders laboured under the delusion that she was a man and shared one head with her husband. She called the former director of the mental hospital her father, said that his predecessor had put his finger into her heart and said it was broken. Many wounded soldiers, "a whole session", hung on her back. Once again these ideas sound symbolical. She put clear and concrete ideas in place of abstractions, which were not available, such as the trivial thoughts of physical and mental unity with her husband, of her security in care of the director, and of her deep affection for the former director. These are paralogical derailments into a lower level of thought with new concept formations which simulate creative performances.

Similar disorders of awareness of self (experiences of self=*Eigenerleben*) in brain injuries and focal brain lesions point to the cingulate gyrus where afferent impulses from the inner organs and vegetative centres arrive by way of the anterior nucleus of the thalamus. The results of stimulation experiments by Penfield and Rasmussen allow us to postulate the island of Reil as a possible site for the localization of these disturbances.

The *other paranoid schizophrenias* are characterized mainly by symptoms which, from a neurological viewpoint, arise in the *brain stem*. These symptoms are hallucinations (especially phonemes), fantastic ideas, confabulations, experiences of influence and reference. Nevertheless, the cortical phenomena of paralogical disorders also occur.

3. In *Progressive Hallucinosi*s a change in the sphere of ideas of social community and finally of the whole of the outside world occurs gradually and this is assisted by numerous auditory hallucinations. The actions of other people are misinterpreted, personal misidentifications occur sporadically.
4. *Phantasiophrenia* presents a lot of fantastic illusions and hallucinations associated with paralogical disturbances of thinking together with absurd new concept-formations which are concerned with all spheres of imagination.

5. Patients with *Progressive Confabulosis* develop delusional formations which are mainly within the sphere of the self and are associated with confabulated experiences. Thought and speech disorders are slight.
6. Only in the final stage of *Progressive Influence Psychosis*, behind the dominating experiences of influence, does a marked deterioration of concepts concerned with the spheres of self and social community occur. Thus one patient attributed the influences in a senseless way to the Jesuits, to an observatory and to the criminal police. *Progressive Inspiration Psychosis* is a variety of influence psychosis in which the influences are experienced as instilled by God or cosmic forces. There is a slight paralogical change of concepts which are concerned equally with the cosmic and religious spheres which led, for instance, in one case to new concept formations in the sense of a vague theological-psychological system. In addition this patient presented remarkable speech disorders with neologisms. Thus he called a garden a "Pflanzenerziehungsstätte (plants' education centre).
7. The term *Progressive Reference Psychoses* comprises those paranoid psychoses which present with experiences of reference and significance or with over-valued ideas and which show a persecutory delusion at the onset, but later frequently have an expansive delusion. During the further course of the illness fantastical imaginations and sense deceptions sometimes occur. These psychoses are *unsystematic forms of schizophrenia* since the symptomatology spreads extensively over different psychological systems. Only a moderate change of the concepts concerned with self and social community occurs; speech disorders (neologisms) are rare.

In all paranoid forms the emotional bases of the above-mentioned psychological spheres of body and personality, which are represented in the brain stem, are involved. *Progressive Autopsychosis*, *Phantasiophrenia* and *Progressive Confabulosis* are cheerful and expansive; *Progressive Inspiration Psychosis* is ecstatic, *Progressive Hallucinosi*s, *Influence and Reference Psychosis* are suspicious or anxious and *Progressive Somatopsychosis* is dysphoric. *Progressive Reference Psychoses* frequently run a course in which opposing emotional states alternate.

Affective changes and fluctuations of mood were observed in brain-injured patients with small shell splinters in the diencephalon, by Hoheisel and Walch (6). They were described by E. Albert (1) in young children with encephalitis and other diencephalic symptoms. Fünfgeld, Jr. (5) and Bäumlér (3) investigating Vogt's collection of brains of schizophrenics, discovered loss of nerve cells and atrophic cells (Schwundzellen) in the thalamus, particularly in the medial and anterior nucleus.

III. CATATONIA;

1. The clinical picture of *Drive-poor Catatonia* is dominated by a lack of spontaneity, particularly concerning speech, which neuropathologically is known to be due to frontal lobe lesions. A decrease of the stock of words results in monotony of verbal expression. Agrammatism of various degrees often occurs. Thus the symptom complex also includes the motor-aphasic syndrome. There is also an impairment of active and creative thought, i.e. an alogical thought disorder with simple failure and imperfect thought performances, which I have also observed in injuries and diseases of the frontal brain.

A patient described the picture of "blind man's buff" (Blindekuh) in the following way, "I see it, I also know what it means, the crying shame." He explained the picture of "the broken window pane" as follows, "These are blackguards, good-for-nothings, the pane broken, monster." Another patient was asked to differentiate between child and dwarf: "Grosser Unterschied . . . durch Bestehen, durch Herkunft . . . es ist im allgemeinen, wo eben schon besteht . . . durch Arbeit. Der Zwerg versteht wie anders das Kind, wo gleich gross mit ihm dasteht." (Big difference . . . by existence, by origin . . . it is in general where there already exists . . . by work. The dwarf understands as otherwise the child, who exists, as tall as he.) The monotony should also be noted.

In all the other varieties of catatonia psychomotor signs due to the disorders of the brain stem are predominant.

Akinetic and Parakinetic Catatonias are of an antagonistic nature and characterized by psychokinetic playful impulses (spielerische Regungen) arising from the brain stem.

2. The *akinesia*, i.e. the lack of impulses, is associated with a restriction of movement, dyskinesia, waxy flexibility, automatic co-operation and Gegenhalten (automatic resistance). Similar states occur in focal lesions of the pallidum and thalamus. Hopf (7) has found atrophic cells (Schwundzellen) and loss of cells in the pallidum of catatonics which could not be observed in the brains of other schizophrenics of Vogt's collection. I have had the opportunity to convince myself of this fact.
3. The *parakinetic increase of impulsive activity* results in distorted and eccentric movements which remind one of chorea, athetosis and torsion dystonia. Parakinesias and other hyperkinesias due to focal brain lesions are localized in the striatum, especially in the caudatum and the thalamus. They were also observed due to small shell splinters in the diencephalon during World War II (Zülch (25) and Cl. Faust).

Negativistic and Proskinetik, Stereotyped and Iterative Catatonia can be considered as two opposed pairs which are characterized respectively by the strivings of negation and affirmation, of stereotypy and repetition. These disorders can be localized in the brain stem.

4. The "*forced antagonistic innervation*" observed by E. Beck (2) in a post-encephalitic state where other symptoms also indicated a brain stem lesion is related to negativism.
5. The affirmatory tendency of the *proskinetik catatonics* (as described by Leonhard) is in accordance with their turning towards the examiner (Zuwendung), with their meeting him half way (Entgegenkommen), and their readiness to imitate. The patients seize everything they see and everything which touches them, in a short-circuiting manner. They show tapping, plucking and picking movements and talk only in a whispering voice. They yield to passive movements without remaining in given postures and offer an automatic obedience. Echo responses and Vorbeireden (talking past the point) also characterize Leonhard's "Speech-prompt Catatonia".
6. In *Stereotyped Catatonia* verbal utterances and stereotyped movements occur which differ from the uniformity of drive-poor catatonia because of their mannerisms and a certain restlessness.

7. The *Iterative Catatonia* differs from the other catatonias by a greater variation in its symptoms of restlessness and other features, as well as by its course with remissions and the final picture of a milder stage of defect. Therefore Iterative Catatonia (or "Periodic Catatonia" as designated by Leonhard) belongs to the *unsystematic* and *extensive* forms of schizophrenia. Stereotypies and iterations similarly occur in focal lesions of the brain. They are localized in the striatum, particularly in the caudatum. Together with my co-workers Herz and Pittrich (9) I was able to take motion pictures of all catatonic symptoms and clinical pictures.

IV. HEBEPHRENIAS

1. *Apathetic Hebephrenia* is characterized by a simple affective devastation and an ethical flattening, increasing as the illness proceeds, and interrupted only by brief changes of mood and states of excitement. Drive (Antrieb) decreases to the same degree, and thought tests reveal an alogic defect.

An orthodox Jewish patient no longer bothered about her religious duties, neglected her clothes and became voracious. She smeared when eating, licked the other patients' plates, rummaged for edible things in the garbage and went begging from passers-by without any shame. Sometimes she wandered about naked or lay apathetically and inertly on the floor.

2. *Silly Hebephrenia* and (3) *Depressive Hebephrenia* present, beside a less marked affective and ethical flattening, affective changes of a silly cheerfulness or of a discontented and hypochondriacal depression associated with eccentric habits. These changes of mood gradually fade. Affective blunting, impoverishment of drive, and alogic thought disorder remain.

Two examples: "What is the difference between chest and basket?" Patient's answer: "I know what kind of a difference there is." "Difference between staircase and ladder?" Answer: "This is undoubtedly a difference."

4. Leonhard's *Autistic Hebephrenia* differs from the other forms by its constant autism associated with suspiciousness, persecutory delusions, and frequent sense deceptions which decrease later on.

Seen from a neuropathological point of view, the ethical regression of the hebephrenics is comparable with the changes of character occurring in injuries and focal lesions of the *orbital brain*. The cheerful and depressive swings of mood in Silly and Depressive Hebephrenia resemble the phase-like changes of mood in cases with shell splinters in the *diencephalon* as reported by Hoheisel and Walch (6). Affective blunting is also due to disorders of these structures.

In considering the multiplicity of schizophrenic symptoms and syndromes with their neurobiological connections between the cerebral cortex and the brain stem, I am unable to see a common factor associated with or comprising all these symptoms. I do not find any hint of a consistent pathophysiological *basic disorder* which Berze believed to have found as a "Hypotonia of consciousness" based on a primary insufficiency of psychic activity. Recently Wyrsh (24) has mentioned a "*schizophrenic basic mood*", i.e. a peculiar mood and a special state of consciousness. But these are phenomena too vague to be useful, and besides they only occur in cases of recent illness. This also applies to the *lowering of the "I" quality* of perception, feeling, thinking and willing. Moreover, such depersonalization is also seen in certain psychoses of alienation which are related to endogenous depressions. Wyrsh's specific symptoms of

autism and splitting of personality not only do not occur even in all schizophrenics but also occur in non-schizophrenics. Carl Schneider (21) has assumed three different schizophrenic basic disorders which, on the whole, are supposed to be associated with each other. They are considered to release three symptom complexes, viz. "Gedankenentzug" (thought withdrawal), "Sprunghaftigkeit" (desultoriness), and "Faseln" (drivelling). But these symptom complexes do not cover the diversity of schizophrenic symptoms and the attempt to deduce the remaining symptoms from a coincidence of more than one complex appears to me to be artificial.

Secondary symptoms which arise from a partially intact mental life, as a response to the *primary* morbid symptoms, must be omitted here. According to their nature they cannot possess any cerebro-pathological correlations. These secondary symptoms are the "Erlebnisformen" (forms of experience) of mental illness described some time ago by Jaspers and Mayer-Gross and elaborated recently and enlarged as the "*Daseinsformen*" (forms of existence) by L. Binswanger and others.

Although no general fundamental schizophrenic disorder has been discovered until now, schizophrenics participate in their *own peculiar way* in all symptoms and clinical pictures which occur in psychoses. In grouping the various psychotic states according to their similarity or difference with states of a healthy mental life the schizophrenias make up almost half the group of *heteronomous syndromes* which are foreign to the normal psyche. These are e.g. the states of thought- and speech-deterioration with paralogic-paraphasic lapses, the states of ethical flattening and affective blunting. They are *axis syndromes* (in the sense of Hoche) of the schizophrenic illnesses. On the other hand, the states of disordered consciousness, waking, memory, orientation and recollection (alteration of consciousness, sleepiness, twilight state, delirium and amnesic syndrome) are not schizophrenic. They do not belong to the schizophrenic psychoses which we assume to be of a "fine-organic" nature, but they belong rather to the gross-organic traumatic, circulatory, senile, inflammatory epileptic and symptomatic (toxic-infective) psychoses.

The *intermediate syndromes* which are not quite so remote from a normal inner life belong for the most part to the schizophrenic states. These syndromes are the states of striving, especially negativism and autism, certain states of psychokinetic impulses (Regungen), i.e. akinesia, parakinesia and hyperkinesia, and hallucinosis, confabulosis, fantastic excitation and the states of influence, reference and significance. Among these symptoms there are some that occur more frequently than others (for instance auditory and somatosensory hallucinations, experiences of influence, reference and significance). But in the intermediate syndromes there participate also—although they have other centres of gravity—the symptomatic as well as certain phasic psychoses which are closely related to manic-depressive illnesses.

The *homonymous syndromes*, particularly the affective ones, which resemble the states of a healthy inner life do not occur as pure forms in schizophrenia, but they accompany and colour schizophrenic syndromes. This group of homonymous syndromes is mainly made up by the manic-depressive psychoses and phasic psychoses closely related to them.

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