

ON THE PSYCHOPATHOLOGY OF SCHIZOPHRENIA*

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IN this paper it is my intention to review some of the central aspects of the psychopathology of schizophrenia. At the outset it would be appropriate to establish the role which psychopathology must play in our efforts to arrive at a fuller understanding of the schizophrenic psychosis. Psychopathology is, as the term itself reveals, a psychological study of abnormal mental functions. It is not primarily concerned with the organic bases for the disturbance of mental activity, but such a study does not imply that the roots of abnormal psychological processes do not in fact lie in somatic pathology. To my mind psychopathology and studies of disturbed brain function in mental disease are complementary to one another. Many distinguished workers in the field of the psychoses have referred to the disappointing results of biochemical and electro-physiological research in schizophrenia. They have suggested that the failure of such research has arisen in part from the absence of correlation between clinical studies on the one hand and physiological studies on the other. Tait (1958) has remarked that although physiological research can provide us with a wealth of data this data will only become meaningful whenever clinicians are in a position to provide biochemists and electrophysiologists with sets of specific questions. The formulation of such questions must depend upon a refinement of our diagnostic categories. Similar criticisms have been levelled against psychological research. In a recent review of contemporary psychological research Rabin and King (1958) have pointed out that the lack of criteria necessary for the selection of a homogeneous group of patients leads to the vitiation of much current psychological research. It is possible that psychopathology may be able in the future to contribute something to the solution of these methodological difficulties which so beset and hamper contemporary research in schizophrenia.

GENERAL PROBLEMS OF PSYCHOPATHOLOGY

There is a frequent and understandable tendency to conceive of psychopathology as solely concerned with psychological explanations of symptom formation. Such explanations generally utilize concepts derived from psychoanalysis. The concept of an unconscious mental conflict which leads to a failure of repression and thus to the symptoms of a psychoneurosis is a good example of a theory which explains the occurrence of a specific form of mental illness.

* Based on a paper read to the Royal Medico-Psychological Association at Glasgow, July, 1959.

Here we are dealing with an important aspect of psychopathology—one which emphasizes the dynamic character of mental processes. However, psychopathology must be thought of as embracing a much wider view of mental activity in disease if we are to do justice to this important subject.

Psychopathology is also concerned with the form which mental processes take in disease. The altered states of consciousness and the thought disturbance in schizophrenia, the depression of mood in melancholia and the abnormalities of perceptual processes which occur in most psychotic states are all within the province of psychopathology. Reference to certain textbooks of psychiatry reveals that these phenomena are described in the chapter entitled psychopathology. In these accounts we are presented with a description of the form which the conscious mental processes have assumed under the impact of the disease. Today we are not satisfied with a description of such psychopathological phenomena alone. We look for an explanation of these subjective experiences in terms of mental conflicts of which the patient is unaware. We postulate differing mental contents involved in the conflicts depending upon the nature of the symptoms and the ideas which can be inferred from the patients' communications about his mental life. Here we are no longer concerned with the registration of the patient's conscious mental processes but with the construction of psychopathological hypotheses of the type to which I initially referred.

During the past years psychopathological theories have increased in number and complexity. In most cases they are concerned with the content of specific unconscious phantasies. We generally find that a theoretical relationship is established between the signs and symptoms of the disease and these unconscious phantasies. In these formulations which are very frequently concerned with schizophrenia psychopathology is identified with unconscious dynamic mental processes which are conceived of as playing the decisive role in symptom formation. Other characteristics of mental activity are either ignored or relegated to a position of minor importance.

In his theoretical papers Freud (1915, 1916) declared that mental processes were not adequately described unless the description included their location (the topographical aspect), their energetic charge (the economic aspect) and their relation to mental conflicts (the dynamic aspect). Such a comprehensive account of mental processes is not easy to formulate in either health or disease but it is an ideal at which we should aim. In doing so we no longer limit the subject of psychopathology either to a description of the form of conscious mental states in disease or to hypotheses which are limited to the concept of unconscious mental conflict. Psychopathology should extend beyond such narrow confines.

In schizophrenia we are presented with phenomena which are completely different from the mental processes of the healthy or neurotic individual. Such phenomena are not necessarily encompassed by the patient's awareness in consequence of altered states of consciousness. Sometimes they only manifest themselves in behavioural activity. In order to obtain a comprehensive account of the formal aspects of a mental disturbance it is essential to possess some knowledge of the form which primitive and undeveloped mental processes assume. The possession of this information sometimes allows us to recognize and differentiate the varied clinical manifestations. In paying such close attention to the form of mental processes we are following a basic principle of natural science—namely the description and classification of phenomena. In contrast to most psychopathological formulations which emphasize unconscious content

we are freed from the difficulties which follow upon abstraction and inference from clinical data. The leap from clinical observation to psychopathological theory is a dangerous one. We know that different observers can, in accordance with their theoretical predilections, present two entirely different psychopathological explanations from identical clinical material. This has not led to an increased confidence in the value of psychopathology. Perhaps one way out of the present impasse is to retrace the steps taken by Schilder (1923) who attempted to find meeting points between psycho-analysis, experimental psychology and genetic psychology in the hope that it might lead to a deeper knowledge of what he called "the formal structure of the psyche" (Schilder, 1923).

FORMAL ASPECTS OF "PRIMITIVE" MENTAL PROCESSES

The description of primitive and undeveloped mental processes has been accomplished by two methods. First place must be given to the psycho-analytic method. By its discovery Freud (1900, 1913, 1915) was able to describe the characteristics of unconscious mental processes and note their similarity to the mental activity of young children and primitive peoples. This discovery led in turn to the second method—the direct observation of young children and primitives.

Much of Freud's theoretical writings contain references to what has been described as the primitive thought process. In the theoretical chapter of *The Interpretation of Dreams* (1900) and in other works he was less preoccupied with the specific characteristics of this form of mental life than with describing a hypothesis which would adequately account for its functioning. He called the mechanism which he hypothesized the primary process in contrast to the secondary process which governed the action of conceptual and reality adapted thinking. Nevertheless one characteristic of primitive mental processes becomes apparent after the shortest acquaintance with the study of dreams—namely the prevalence of imagery. Freud (1900) understood very early that the hallucinatory quality of dreams resulted from the replacement of ideational content by sensory images. A consequence of this appreciation was the recognition by Varendonck (1912) of the manner in which concepts are replaced by concrete images during states of fatigue and prior to sleep. As Freud (1923) points out "Thinking in pictures, is, therefore, only a very incomplete form of becoming conscious. In some way, too, it approximates more closely to unconscious processes than does thinking in words, and it is unquestionably older than the latter both ontogenetically and phylogenetically".

On at least two occasions (1913, 1915) Freud described in some detail the general characteristic of unconscious mental processes. In *Totem and Taboo* (1913) he showed how clearly these unconscious processes resemble the mental activity of young children and primitive peoples. He established the general principle that unconscious mental life is typified by the supremacy of psychical over external reality. The ideas of things become more important than things themselves. This over-valuation of mental processes in comparison with reality Freud (1913) described as the omnipotence of thoughts. The consequence of the primacy of thought leads to a form of logic—magical thinking—which ignores the difficulties of time and space. As Freud (1913) puts it "... the world of magic has a telepathic disregard for spatial distance, and treats past situations as though they were present".

Psycho-analysis has had the virtue of turning the attention of psychologists

to the problems of mental development particularly as they apply to the cognitive functions. Today genetic psychology is one of the most extensive branches of psychology and Werner's name stands out as one of the leading figures in this field. It is to his work that I will principally refer in the following brief account of childhood mental processes. Werner (1957) characterizes primitive mental activity as syncretic. By syncretic he refers to a form of mental organization in which the various mental processes are not clearly differentiated from one another. Let us first turn to Werner's (1957) account of primitive perceptual function to illustrate his concept of syncretism.

Research undertaken by genetic psychologists indicates that the young child perceives in quite a different manner to the adult. In the case of visual perception the child perceives the dynamic aspects of an object rather than its static qualities—a dog, for example, is something that barks or bites. Inanimate objects are regarded as manifesting similar motor and affective attitudes as the child experiences himself. Werner (1957) refers to this form of perception as physiognomic as it is utterly different to our everyday adult perception in which things are known in accordance with their geometrical-technical qualities. Childhood perception is syncretic in that it is inextricably linked with affect and motor behaviour. This is nowhere better seen than at the cinema or television show. Young children watching an exciting "Western" could be said to perceive with their bodies. Unlike the adult, who may only indicate his reaction in his facial expression or by the slightest movement, the child's whole being is involved in the perceptual process.

A further characteristic of primitive perception is its undifferentiated nature. The different sensory modalities have a closer relationship at the primitive level. The term *synaesthesia* denotes the phenomenon of a specific stimulus arousing not only the corresponding sensation but a second sensation also. A common instance is colour-tone *synaesthesia*, as when the perceiving individual sees colour while listening to tone. According to Werner (1957) *synaesthesia* should not be looked upon as a bizarre and abnormal mode of perception. He believes that it is bound up with the development of the faculty of perception.

Before leaving our consideration of primitive mental processes we must give some attention to the mode of thought appropriate to this developmental level. As in the case of perception the primitive thought process is fused with affect and with the sensori-motor functions. It is syncretic in nature. Let us take as an example one form of primitive thinking—namely primitive abstraction. This can be observed when young children between the ages of 3 and 5 are asked to select from a number of red triangles and green circles those figures which are the "same" as a standard form. This standard may be either a green triangle or a red circle. The children unhesitatingly make a selection based on colour. Their selection is not determined by the shape but upon a tendency in perceptual organization to bring together those elements which show a perceptual similarity. This attraction of a common property of objects is characteristic of primitive abstraction. This form of thinking, therefore, is closely tied to a mode of perceptual (sensory) organization which is less concerned with the details of the perceived object than with qualities which dominate and permeate the totality. This kind of primitive abstraction is to be observed in the utterances of young children. Werner (1957) quotes the case of a child of 3 years of age who sees a painted landscape with a boat in it, and says "It's summer now!" even although it is a winter scene which is represented in the picture. The boat dominates the child's experience and determines the meaning of the entire

scene. During the course of development the child frees himself from this form of abstraction. He comes to perceive that objects have different qualities any one of which may be taken as the point of departure for an ordering process.

THE CONTRIBUTION FROM EXPERIMENTAL PSYCHOLOGY

Recent research by experimental psychologists in the perceptual field has, to my mind, a special relevance for a psychopathology of schizophrenia. The work to which I will refer springs from two sources. The first, associated again with the name of Werner, is concerned with an experimental study of the syncretic tendency in perceptual processes as they occur in adult and child. The work of Fisher (1954), Klein (1959) and others on subliminal perception provides the second contribution which experimental psychology is currently making to the study of abnormal mental processes.

I

Werner and Wapner (1952) have devised experiments to test the conclusions which they have drawn from their observations of the perceptual function in children and in primitives. Believing that perception at such developmental levels is intimately linked with motility—an aspect of its syncretic nature—they have devised experiments to support or weaken this hypothesis. In these experiments Werner and Wapner (1952) examined the effect of body tilt on the perception of verticality. A large number of subjects of varying age were required to adjust a luminous rod in the dark to a position in which the rod appeared vertical, while the subject's body position was tilted 30° from the vertical position. Adult subjects and older children perceived the rod as vertical when it was in a position opposite to the side of the body tilt. Younger children, however, particularly those below the age of nine, perceived the rod as vertical when it was in a position relative to the side of the body tilt. This observation is cited both to support the theory that childhood perception is influenced by motility and to illustrate the developmental principle of the gradual differentiation of the self from the environment. It is also in accord with Piaget's (1947) view that spatial order for the child is dependent upon body position.

In further experiments Werner and his colleagues (1952) have demonstrated that visual perception is equally influenced by different forms of sensory stimulation. This suggests that a kind of "functional equivalence" (Werner) exists between the different sensory modalities. In one set of experiments Werner and Wapner (1952) presented subjects with an ambiguous pattern where either the left or the right side of the picture could be perceived as the figure. As the pattern was shown to the subject he was simultaneously presented with an auditory stimulus (a tone) in one ear. The results showed that the area perceived as the figure was dependent upon the side of auditory stimulation. When the right ear was stimulated the left side of the pattern was seen as the figure and *vice versa*. Thus extraneous stimulation of the subject in one sense modality produced a direct response in another sense modality. In other experiments perception of the vertical was equally affected by kinaesthetic and auditory stimuli. Further work of this kind with children indicated that this functional equivalence was even more pronounced in their case.

II

It is some years now since Poetzl (1917) demonstrated experimentally that the manifest content of dreams contains perceptual data which never reach consciousness. He also suggested that in psychotic states patients become aware of percepts which ordinarily remain unconscious. For some reason Poetzl's work was neglected until quite recently. However, in the past few years many reports have appeared confirming Poetzl's findings and describing the results of various types of tachistoscopic experiment.

There is now little doubt that the non-conscious registration of stimuli is a continuous process. Of particular interest is the work of Klein (1959) which has been concerned with the ways in which subliminal registration affects thought in the waking state. The results of his work suggest that subliminal registrations activate processes outside awareness which lead to different forms of verbal and non-verbal expression. Klein (1959) has proposed that the term subliminal perception is rather unsatisfactory. He has distinguished between the mental registration of sensory stimuli and conscious perception. To quote from one of his articles (1959) "The processes responsible for phenomenal registration seem to be independent of those which govern attention deployment—the means by which we become aware of things in a distinctive quality". In his opinion a stimulus which effects registration will only appear as a conscious percept when it is endowed with a special cathectic quality. At this point Klein appears to be following Freud's (1938) theory that "being conscious cannot be the essence of what is mental . . . it is only a quality of what is mental, and an unstable quality at that". Klein's experimental work indicates that the registration of sensory stimuli occurs on a wider and more indiscriminate scale than could have ever been imagined on the basis of observable reactions. Under normal circumstances it is relatively easy for sensory stimuli to enter the psychical system but they cannot so easily emerge into consciousness as either percepts or images. Klein conceives of "controlling structures" within the ego (i.e. the psycho-analytic ego) which determine the fate of the sensory registrations. It is reasonable to assume that the integrity of such "controlling structures" is essential if the function of attention is not to be at the mercy of extraneous sensory stimulation or of the imagery which arises from unconscious phantasy.

CLINICAL OBSERVATIONS

At this point I would like to present a number of clinical observations illustrating in the main the disturbances of thought and perception which can occur at different stages of the schizophrenic process. The majority of these observations were made during group psychotherapy. This method gives the clinician an unrivalled opportunity to observe inter-patient and patient-doctor interaction.

I

The first observations which I will report were made on a man of thirty years of age who was suffering from an acute schizophrenic episode. In a short time he had developed paranoid ideas and delusions of various kinds. While his thought processes were disturbed they were not so seriously impaired as to interfere with intelligible verbal communication. Thoughts had become reality for this man. In consequence he was convinced of his omnipotence. He was the centre of the world and the prime cause of all events. As an illustration of this

I will quote his statement that his stubbing out a cigarette had caused a man's death. He announced this shortly after reading of this event in the newspaper at the moment when he had put out a cigarette he had been smoking. In patients of this kind we are presented with a form of egocentrism—to use Piaget's term—which is almost identical with that of early childhood.

The next observations are taken from an entirely different category of patient—namely those patients whose illness has continued for many years without remission. In these patients we can detect the presence of a form of thinking which has been superseded in the healthy adult. It may, perhaps, be best compared with the primitive form of abstraction to which I referred earlier. The first example is brief. The patient was a young catatonic man of about 28 who had been ill for several years. He was rather negativistic but would reply when spoken to. He was undergoing psychotherapy and at the beginning of the treatment he was asked if he knew the season of the year. It was in fact a winter's day with snow on the ground but the sun shining brilliantly. The patient looked out of the window and without hesitation answered summer. I do not think this was a nonsensical or evasive answer. Can we not infer that his response had been determined by his awareness of the sunshine and that this percept had overshadowed any other facet of the observed situation. This reaction could be profitably compared with that of the child for whom the boat in the picture was the stimulus for his answer. This clinical example as in those to follow indicates the artificiality of discussing under separate headings the disorders of thinking and perception. They are so closely inter-related that the consideration of one implies the consideration of the other.

The tendency to abstract potentially communicable material on the basis of common concrete data can be clearly observed in chronic hebephrenic patients. This form of mental process is characterized by an apparent inability, on the patient's part, to assimilate a number of dissimilar facets of a whole object and to arrange them in order of importance. For the patient the part is as important as the whole. Clinical observation suggests also that the selection of the part is partly determined by affective factors. In the following examples the patient's communications were the outcome of an interaction between the patients and nurses and between patients and doctors.

Both of the instances which I will quote occurred during group psychotherapy. This particular group of female patients was conducted by two male doctors. The patient in question, a rather disorganized chronic hebephrenic, had been anxious in her relation with the therapists. Her conflict in this regard was expressed in the following communication—"I was frightened of two umbrellas in case their handles damaged me, so I stayed out in the rain. Now I'm not frightened any more and I shelter under the umbrellas." I think it reasonable to assume that the sexual factor (the transference in this case) does not account for the particular form of the mental process but determines its content. The choice of umbrella rather than some other attribute of the therapists must result from its unconscious phallic associations. In the second case the patient was forever referring to nurses as either "capes", "hems", "ruffs" or "waterproofs". This was particularly evident whenever she was angry. Here again we have an example of this primitive thought process which utilizes a common sensory impression in order to make a generalization.

II

The best known perceptual disorders in schizophrenia are the hallucinations and illusions. However, I will not refer to such phenomena here as it is my

purpose to direct your attention to other forms of perceptual anomaly. Periodically we are fortunate enough to encounter patients who are able to describe the manner in which their perceptual faculties are effected. On two separate occasions catatonic patients have reported that the perception of their surroundings was unusual and a source of fear. One patient said that she could not move "because things won't stay still and I'm afraid". A more lucid account of the same phenomenon is contained in the following remarks by a catatonic patient reported by Sechahaye (1956): "All the objects were transformed. I no longer recognized them. They suddenly took on other forms and I lost the only stability I had . . . I did not want to move, because if I did everything changed around me and upset me horribly so I remained still to hold on to a sense of permanence!" Such phenomena have something in common with the physiognomic perception which occurs in early childhood.

The next example is also concerned with the relationship between perception and motility. The patient was a young man of twenty-three years of age who suffered from catatonic schizophrenia. He spent many hours in a state of complete immobility. During treatment it became apparent that any movement was associated with visual perceptual distortion of the environment which he variously described as "a flatness", "a piece of stage scenery", "a flat streak of colour". Moving faster increased the severity of this disorder. It was noted that sudden changes in visual perception, brought about by sudden alterations in his visual field, always led to catatonic rigidity. This form of catatonic manifestation appeared not only in response to changes in visual perception but also as a result of an unexpected noise or to a rapid alteration in sounds already heard. This identical motor reaction in response to different forms of sensory stimuli suggests that in this patient's case there was an equivalence between auditory and visual percepts. This clinical observation can be compared with the experimental findings of Werner which I mentioned earlier. The equivalence of sensory stimuli noted in the laboratory was paralleled by the patient's remark that "A movement in front of my eyes is like hearing a sound in my ears". Here we are presented with a phenomenon which could be classed as synaesthetic. In these instances of disturbed visual perception there appears to be a return to the syncretic form of mental function where perceptual modalities are no longer discrete and where motility is no longer autonomous but is once again an aspect of an undifferentiated sensori-motor reaction.

In the clinical examples which are to follow I will describe yet another type of perceptual abnormality which has not received so much attention as it undoubtedly deserves. Bleuler (1924) has described this phenomenon as "a peculiar kind of distractibility". It occurs in cases in which a deterioration of the thought processes has taken place. He observed that during conversation patients will raise apparently irrelevant topics. This preoccupation can be traced to accidental sights or sounds which have impinged upon the patient's awareness. The group situation afforded an excellent opportunity to observe this "distractibility".

During treatment sessions my colleagues and I (Freeman, Cameron and McGhie, 1958) noted that some patients were inclined to incorporate what seemed to be random percepts into their stream of talk. During one meeting a deteriorated hebephrenic woman was talking rapidly and incoherently. At the other end of the room a colleague had said to another patient, "You think I only like married women". Without halting in her flow of speech the first patient said, "Yes, I like married women" quite unperturbed by the irrelevance of her comment. In my final example a patient of similar kind showed how

seemingly indifferent auditory percepts may be employed to provide ideational content which is used to convey allusions to the group situation. The patient in question had been asked what she had been doing at the weekend. Her reply was that she would have liked to have listened to the noise of the canvas. My colleague understood that this apparently bizarre reply referred to a canvas-type churn. Knowing that the patient's mother had such an implement at home he told her that she had longed to be at home during the weekend. When she was asked about her mother's cheese making the patient said that her mother made cheese for six cats. Immediately prior to this reply a cat had miaowed outside the window. The number six referred to the six patients in the group. The psychical processes operative in this example bear a close resemblance to the mechanisms of dream formation. As in dream formation there is the registration of apparently random sensory stimuli (the day residues) followed by a working over of the memory traces of the stimuli by the primary process. The instinctual wish that motivated the communication was surely the desire to be re-united with her mother.

A PSYCHOPATHOLOGY OF SCHIZOPHRENIA

Freud's (1923) concept of the ego provides us with a theoretical model which can be used when we try to work out a psychopathology of schizophrenia. From a topographical standpoint the ego comprises the organized area of the mind. This mental organization comprises a number of functions which enable the individual to adapt to his environment and to satisfy his basic needs. Amongst the most important functions are thinking, motility, perception, memory, reality testing and defence. The last-named function has the task of limiting the conscious mental expression of the instinctual drives. In this respect it expresses the dynamic character of the ego. The effective performance of the ego must depend upon somatic energy sources. This economic aspect of the ego has been the subject of much discussion both in normal and pathological states.

In schizophrenia we find that one or more ego functions are gravely disturbed. We must ask what sequence of events leads to the ego disturbance which we recognize as the symptoms of the disease? Psychopathological interpretations generally take a psychical conflict as their starting point. The conflict does not lead to symptom formation in consequence of a failure of repression, as in the neuroses but instead leads to a break with reality. A fundamental weakness in the ego is envisaged which renders it helpless in the face of inner dangers. This in turn results in a failure of function—particularly reality testing. A simple example would be the male patients whose unconscious homosexual conflict cannot be contained by the ego. The consequence of this is a failure of reality testing and a simultaneous projection of the unconscious homosexual wishes. The psychotic symptoms (the paranoid delusions in this case) now become a substitute for the unconscious conflicts and provide a defence against conscious awareness of the homosexuality.

This theory, initially proposed by Freud (1911), of a break with reality as the initial phase in a psychotic illness was challenged by Federn (1953). His extensive clinical experience with schizophrenic patients led him to propose that the break with reality was a secondary reaction. He believed that the first manifestations in the disease were due to perceptual distortions which then led to the break with reality. These perceptual abnormalities could often be traced to a psychic conflict. Federn's theory has two important implications.

First it suggests that the defect in schizophrenia is to be found in an ego which reacts anomalously to psychic or physical stress. Second it raises the possibility that the psychotic symptoms are not necessarily linked with an unconscious conflict nor is the aim of the symptoms the provision of a defence against the conscious recognition of the conflict.

The clinical data indicate that once the disease process is under way a regressive process occurs within the ego. It no longer functions on an adult level but on a plane similar to that of the young child. The instances which I have quoted, and the literature is full of them, illustrate this similarity. However, we are entitled to ask if regression is the only process at work within the schizophrenic ego. This question is particularly important because there is an inclination to conceive of all schizophrenic symptoms as being no more than the re-appearance of infantile mental processes, of infantile phantasies and their associated affects.

The researches of Klein and his colleagues (1959) allows the construction of a hypothesis which can account for some of the typical manifestations of schizophrenia without invoking the concept of regression. You will recall that Klein suggested that there exists within the healthy ego "controlling structures" which regulate the entry into consciousness of sensory stimuli which have already achieved a mental registration. When we observe the chronic hebephrenic patient as in the instances quoted we are presented with a situation not unlike that which Klein (1959) conceives of as occurring unconsciously in the normal individual. The patient indicates that he is aware of a deluge of percepts and images. These cases present an almost antithetical condition to that state of normalcy envisaged by Klein (1959) where "getting into the system seems to be less difficult than emergence in awareness".

Such clinical observations taken in conjunction with the experimental findings lead to an explanation of the phenomenon known as "splitting of the thought processes". It is conceivable that damage to the perceptual system of the ego leads to a failure of its screening function. As a result the individual can no longer insulate a train of thought from extraneous sensory stimulation. Percepts and images now compete for attention with the already existing thoughts. It is also likely that the perceptual disorder leads to an awareness of imagery which springs from the instincts. You will recall that in *The Interpretation of Dreams* (1900) Freud pointed out that a distinguishing feature between the primary and secondary process was the absence, in the latter, of mobile cathectic energy. This precluded, in secondary process thinking, the appearance of condensation products whose sensory vividness would seize attention and thus disrupt reality adapted thinking. This recognition by Freud of the potentially disrupting effect of the primary process is equally applicable to external stimuli. When the ego is damaged not only does the primary process become more prominent and provide an unusual source of internal perception which may interrupt thought but there occurs simultaneously a loss of the capacity to insulate thinking from the multiple sources of external stimulation. This hypothesis fits rather well with Schilder's (1923) theory that the schizophrenic is unable to pursue "the determinative idea" to which the normal person directs his thoughts on account of the fact that he is at the mercy of ideas and associations subsidiary to the main stream of his thinking.

Two distinct yet inter-related processes may be at work within the ego. The first is the regressive trend and the second is in the nature of a defect which effects such functions as perception and the defence mechanisms. In consequence of the former there is a re-instatement of child-like mental processes while as

a result of the latter there appear new forms of psychic phenomena which have never before had a mental representation. I think that we could classify the catatonic disturbances of motility under this category.

According to the approach outlined here we have in schizophrenia a mental organization which has suffered an injury of varying extent. The instinctual life—the sexual and aggressive drives—is expressed through the medium of this mental organization. Their manifestation will depend upon the ego level which has been reached in consequence of the disease process. We have seen, in at least one example, how the sexual drives determine the content of the mental process but not its form. Some of the clinical observations which I have cited suggest that there is a strong reaction against the disintegration of the ego. It would appear as if the patient is attempting to recover his capacity for stabilized thinking, motility and perception by insulating himself against stimulation arising from the environment. This would account for the reluctance and resentment which many patients show when invited to undertake activities or make human contacts. It is as if they feel themselves to be in a state of overstimulation and their desire is to reduce this to manageable proportions. Such an interpretation is supported by the observation (Harris, 1959) that when schizophrenic patients are subjected to sensory deprivation they find the experience more tolerable than normals. In some cases hallucinations were actually reduced.

We are now in a position to discuss the manner in which the psychological structure of the psychoses differs from that of the neuroses. In the latter the principal task is to remove by symptom formation any trace of the danger situation created by the failure of repression. In the former the symptoms have an entirely different function. They are not directly related to efforts directed towards an annulment of dangers created by the instincts but with efforts to restore the ego. Psychotic symptoms can be regarded, therefore, as having a stabilizing and adaptational role. They are, in effect, anomalous ego reactions. These reactions, arising from a mental structure whose function is defective, do not succeed in preventing the eruption of the primary process nor do they ensure a satisfactory adjustment to the environment. However, they do permit some kind of stabilization of the psychic economy. To my mind this is the one important factor common to the neurotic process and to that which occurs in psychosis.

PSYCHOPATHOLOGY AND CLINICAL RESEARCH

In this paper I have tried to discuss the psychopathology of schizophrenia from as broad a standpoint as possible. This has led to an interest in genetic and experimental psychology—subjects which have much to contribute to our understanding of mental disease. Clinical and laboratory observations are relatively worthless without a theoretical basis to which they can be related. For this reason we are forced to make use of theoretical constructs which give meaning and order to the observed phenomena. These hypotheses can, in the nature of things, only be approximations to the true state of affairs. Freud's metapsychological concepts (1900, 1915) can be of service in this regard. They will continue to be of service until the clinical and laboratory data demand their revision or dismissal. With their aid we are prevented from limiting the scope of psychopathology to dynamic formulations alone. At the same time

they make us aware of the necessity to study the nature of both conscious and unconscious mental processes.

Unfortunate as it may be we have to acknowledge the fact that clinical research can only become potentially meaningful when it is undertaken against a background of certain theoretical preconceptions whatever their nature. Recognition of this serious limitation allows us to place the subject of psychopathology on an equal footing with other aspects of psychiatry, as a legitimate contributor to clinical research. When we investigate a particular symptom complex or behavioural manifestation we not only want to know its relation to mental conflict but also its relationship to the different psychic systems. The economic or energetic changes which, we must presume, occur within the ego will remain for long enough in the realms of the hypothetical. For this reason I would be inclined to give them less attention.

An important feature of a psychopathological inquiry will be the assessment of the ego state. Study of the clinical manifestations can, for example, give us some notion of the state of the ego boundaries. I do not think that this is uniformly effected in all cases of schizophrenia. We can observe the extent of the perceptual abnormalities, the disturbances of thinking, of attention and motility. We will note the relationship which exists between these functions. I cannot believe that this information will be obtained from routine consultations, questionnaires or even personality tests. To my mind it will only appear in the context of interpersonal relations. It is here that group therapy has an important role to play supplementing the rich information to be obtained from the reports of nurses, occupational therapists and from individual psychotherapy. These interpersonal relationships will enable us to see something of the instinctual life which will be expressed on the ego level operative at the particular time.

I believe that there is an important place for clinical research of this kind. Much more "primary data" requires to be gathered before we can proceed to the elaboration of hypotheses which may be tested by experimental methods. It is to be hoped that in the future possibilities will exist for the integration of psychopathology with clinical research in psychiatry.

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