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The Psychogenesis of Schizophrenia

A Review of the Literature*

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Introduction and Brief Historical Sketch of Aetiological Concepts in the Study of Schizophrenia

The Editor of the *British Journal of Psychiatry* has been kind enough to ask me to write a summary and a critical survey of the objective data bearing on the causation of schizophrenia by environmental factors, especially those of a psychogenic nature. I was also asked to combine with this a general assessment of our knowledge in this field. At first sight the task as defined seems a simple and easy one, namely to collect together all those facts which point to the probability of schizophrenia being caused by the psychogenic influences of the patient's environment. But almost at once, a number of serious doubts arise. What are we to understand by the concept of "Schizophrenia"—should we take it in its widest sense as including all the "schizophrenic reaction types", as do many American authors, or in the far narrower sense favoured by Scandinavian psychiatrists, who recognize only a central or "nuclear group" as true schizophrenia, and describe all related conditions as "schizophreniform psychoses"? Further, what do we mean here by "causation", and what do we call "objective data"? We shall see later that if we were to collect as data only such as a "non participant observer" (H. Stierlin) thinks he can perceive in the schizophrenic's environment, we should miss the significance of those very factors which are most relevant to the development of the psychosis. It is indeed a complex question—and one which has been the subject of much philosophical reflection—whether it is at all legitimate to assume the existence of "causes" for psychological processes, and whether a search for "causes" is a meaningful undertaking. This, however, lies outside the scope of the present survey; all we need to do is to bear in mind that the use of a one-sided conception of causality might from the very start greatly restrict our field of enquiry, so that essential processes by which schizophrenia arises might not even come to our notice.

So we must be clear in our minds as to what we intend to understand by "schizophrenia," and what theory of the disease we are constructing for ourselves. Following the history of psychiatry over the last 150 years, it is extraordinarily instructive to note to what an extent speculative theoretical considerations have, right up to recent times, determined current ideas on the aetiology of psychoses now generally recognized as endogenous. This would not have been a serious matter if research workers had at all times been conscious of this situation; unfortunately this has not been the case, so that authors were inclined to reject *a priori*, and to dismiss as unproven, observations and conceptions arrived at from some other theoretical starting-point, simply because the grounds on which these were based did not fit in with their own theories.

Today we can smile at the disputes between the "psychic" and the "somatic" schools at the end of the 18th and beginning of the 19th century—the one conceiving of mental disorders as diseases of incorporeal soul, the other seeing in these disorders nothing but symptoms of bodily disease; yet even then there were those who took up an intermediate position. Wilhelm Griesinger, known as the father of neuropsychiatry (E. H. Ackerknecht) certainly took up the position that mental diseases are basically

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cerebral diseases, and he laid great stress on pathological anatomy; nevertheless in his Textbook he stated that psychological factors are the most frequent and most productive sources of insanity, as regards both predisposition and, more particularly, actual precipitation of mental illness. In his chapter on predisposition, one is pleased to find him discussing in very modern terms the influence of upbringing as well as that of heredity. He mentions intellectual overstrain as harmful through its "exciting" effect on the brain; but he attaches greater importance to unfavourable and perverted influences on the emotional and volitional make-up of the child. "Thus," he says, "there are cases in which the development of natural benevolent tendencies is inhibited and the more delicate feelings are crushed by excessive strictness, by a cold, repelling attitude on the part of parents, by persistent injustice, humiliation or inconsiderateness; so that from his early years a painful conflict with the outer world is set up in the individual". Similarly, in Krafft-Ebing's Textbook (1879) we still find physical and psychological causes of mental disorder placed on an equal level.

Kraepelin, whose Textbook of Psychiatry first appeared in 1883, repeatedly referred to Griesinger in discussing the psychological causes of insanity. In later editions, however, he gradually moved away from this position, and by 1896 (5th Edition) he no longer attributed more than a precipitating and accelerating effect to mental factors. He felt that it was quite uncertain how far upbringing could influence and transform a person's essence. It was in this 5th Edition that he first introduced the concept of "Dementia Praecox", and it appears in the chapter on "Metabolic Disorders" and in the sub-section on "Dementing Processes", in which catatonia and dementia paranoides are also included. Then, in the 6th Edition, these latter conditions, together with hebephrenia, are absorbed into the "Dementia Praecox" concept. This ranging of dementia praecox under the metabolic disorders (along, incidentally, with myxoedematous insanity, cretinism and G.P.I.) means that a definite aetiological theory is adopted in advance and presented to the reader as the only possible one, although supported only by vague conjectures. It is true that Kraepelin stated expressly that the essential nature of dementia praecox was obscure, and that the most widely held view was that we were dealing here with the gradual failure of an inadequate constitution; he himself, however, considered it more likely that there was a tangible morbid process going on in the brain, and that this was caused by an auto-intoxication connected in some way with changes in the sex organs. In Volume I, on the causes of mental disorder, of the 8th Edition (1913), we read that in the light of recent anatomical and biochemical discoveries the tendency was to regard as more and more limited the probable range of action of psychological factors.

In Volume III, in the special chapter on Dementia Praecox, Kraepelin rejected the Bleuler-Freud contention that many symptoms can be understood and are determined by complexes; one of the objections he put forward was that he was unable to find any sense even in his own dreams, though this was where conditions for doing so would be most favourable; how then could he give credence to the findings derived from the complicated analyses of patients? It is evident that Kraepelin's views on aetiology were guided far more by his general principles and convictions—corresponding as they did to the then prevailing tendencies of medicine to base itself exclusively on the natural sciences—than by any unprejudiced assessment of the available facts.

Applying Freud's doctrine of the unconscious, Eugen Bleuler, in collaboration with C. G. Jung, recognized that many schizophrenic symptoms were conditioned by the patient's life-history and were purely of psychological origin. But he too was tied to the "scientific "outlook of his time, and so it was impossible for him to assume a purely psychological causation of the disease itself. He therefore drew a distinction between secondary symptoms explicable on a psychogenic basis, and primary symptoms to be referred back directly to the somatic disease-process. In his "Dementia Praecox, or the Group of Schizophrenias", published in 1911, he did indeed state expressly that it was not absolutely necessary to postulate a physical disease-process; it was conceivable that the whole of the symptomatology was dependent on psychological

causes. What deterred him from accepting this hypothesis was the presence of associated physical symptoms, the reported findings in the brain, and the course of the disease, in most cases fundamentally incurable and impossible to influence.

Since Bleuler's day the "associated physical symptoms" to which he attached so much importance (such as unequal pupils, tremor, vasomotor disturbances, catatonic attacks), as well as the pathological findings in the brain, have forfeited all significance as indications of a somatic disease-process. In spite of this, many research workers still adhere to the somatic hypothesis, because it seems incredible to them that such a severe and often incurable disease could be of purely psychogenic origin.

In 1932, Mayer-Gross, in his contribution to Bumke's *Handbuch* wrote: "If one takes the view, as we do, that schizophrenia, at least in its large central group, is an organic disease, then one will meet with the greatest possible scepticism any theory which assumes a psychogenic causation, since it is well known that at all times 'psychical causes' have been adduced to fill gaps in our knowledge of the aetiology of mental disorders." It stands to reason that with such an *a priori* attitude there will be no adequate assessment of possible psychogenic factors. Even in Mayer-Gross, Slater and Roth's recent *Textbook* we find formulation on similar lines: "It seems improbable that a severe mental illness leading to deterioration could be psychogenically determined, even if a strong genetic predisposition is assumed. One should, therefore, approach with sceptical reserve the rare cases in which a schizophrenic illness seems to be precipitated by emotional upset, mental conflict or other psychological or social difficulties." The reasons for this rejection of psychogenic causes are much the same as those given by Kraepelin as far back as the 8th Edition of his Textbook (1910–13). These were: that intrapsychic conflicts appear to be more often a result than a cause of the psychosis; that schizophrenic illnesses did not become more frequent in war time; and that, though it was true that schizophrenia was common among persons undergoing imprisonment, this did not prove the influence of an adverse environment, but was explained by the fact that a larger proportion of criminals were latent schizophrenics or at least were markedly schizoid persons.

In the German-speaking countries the most lasting influence on the development of psychiatric thought in the first half of this century has undoubtedly been that of Karl Jaspers. From methodological considerations he was led to establish the basic distinction between "comprehensible" and "causal" relationships. "Comprehension" is possible only within the limits of the conscious in its widest sense; what lies beyond can only be the subject of causal explanation.

If this conception is combined with that of the "schizophrenic process" there is no place left for anything like a "psychogenic origin" of schizophrenia, since *a priori* such a "process", being outside consciousness, is not susceptible to "comprehension". We shall return to this problem later, but it may be said here that disagreement with this dogmatic view has been expressed by R. Gaupp and E. Kretschmer, so that the latter, in his account of the "Sensitive Beziehungswahn" (a delusional psychosis with ideas of reference) felt able to attribute a decisive influence to mental factors in the causation of this syndrome.

The opposite viewpoint is to-day represented by those investigators who, consistently applying the teachings of Freud and his disciples, regard schizophrenia as a neurosis, consider it superfluous to assume the existence of a primary process, and ascribe paramount importance to prepsychotic environmental factors. Here too, it is largely their theoretical basic convictions which guide them in their studies and cause them to select those facts which are in conformity with their outlook. It is interesting to note that, even before the publication of Bleuler's work on schizophrenia, Adolf Meyer had rejected Kraepelin's conception of a somatic process on the strength of his own theoretical convictions as to the nature of man; and on the same grounds he had no difficulty in giving psychogenic factors a prominent place in the aetiology of the disease. To the attitude thus taken up by one of the most influential figures in American psychiatry, together with the continued predominance there of Freudian thought, is largely due the fact that throughout American

psychiatry the conception of schizophrenia as a functional psychosis is taken as self-evident—it is not that the arguments for a psychogenic explanation, if considered without prejudice, would appear so much more convincing than those for a somatic origin. So we find that in the *American Handbook of Psychiatry*, edited by Arieti, schizophrenia is dealt with quite naturally under the heading of the functional psychoses, and a beautifully complete account is given of the way in which the psychotic symptoms develop out of the patient's life history and environment. For Arieti schizophrenia is "a specific reaction to an extreme state of anxiety, originated in childhood and reactivated later in life by psychological factors".

This picture of conflicting ideas on the aetiology of schizophrenia is of course a greatly simplified one, and does not do justice to the diversity of the theories which have been advanced. What needs pointing out however—and this becomes very evident to anyone who examines the history of the investigation of schizophrenia at all closely—is that so many of the aetiological theories derive in the first place from fundamental convictions which influence the worker's choice of observations and the observations themselves; it is far less common to find unprejudiced observations leading to the formulation of theories. This must be constantly borne in mind if the investigations and observations which will now be referred to are to be correctly evaluated. It follows also that in assessing the reported findings one's own conception of the nature of schizophrenia is bound to be a deciding factor. Not long ago, for instance, P. Faergeman published a very full monograph on "Psychogenic Psychoses", including a long-term follow-up of 170 cases. These were cases of acute psychosis which had been observed in Copenhagen between 1924 and 1926 and were diagnosed as psychogenic because their onset was connected with psychic traumata. At follow-up, approximately 16 years later, less than half were diagnosed as "psychogenic psychoses", and a large percentage were accepted as schizophrenic instead. Now this ought really to raise the question as to how many of these later schizophrenics might have been of psychogenic origin. But the author does not go into this at all, evidently because for him the question has been decided in advance. In his diagnostic system "schizophrenia" and "psychogenic psychosis" are quite distinct notions; there is therefore no such thing as a "psychogenic schizophrenia", and if a psychosis originally diagnosed as psychogenic later reveals a schizophrenic clinical picture, then the original diagnosis must have been wrong.

Yet in the present state of our knowledge of the aetiology of schizophrenia it is very necessary that we should hold to an unprejudiced and open-minded approach to the problem. Manfred Bleuler (1962) has recently given the following answer to the question: "What do we wish to indicate by the term 'schizophrenia'? First and foremost, this expression applies to forms of psychoses, mental disorders, insanity—not to other kinds of deviation from health; next it must be limited to disturbances of a kind which, measured by one's experience of oneself and of most other people, appear at first sight beyond understanding or empathy; further, among the psychoses, those in which any connection with an organic pathology has so far not been made clear and yet in which there is not the same evident and generally recognized connection with the patient's life history that characterizes disorders usually accepted as psychogenic. It is an essential feature of a schizophrenic psychosis that in spite of severe mental disturbance the normal life of the mind is not extinguished but continues, though concealed by the manifestations of disease; with patience and skill its existence can always be elicited. In the realm of thought, dissociation prevails; in the affective sphere, incongruity, and in that of self-experience, depersonalization; and these features re-appear in the remaining symptoms, and notably in the hallucinations, delusions, and catatonic phenomena. Moreover, the concept of schizophrenia tells us something about the course of the disease, which may be acute or chronic, run in phases or continuously, benign or malignant; if it results in permanent impairment, then it is impairment of a particular kind, differing sharply and clearly from the dementias recognized as organic. In addition, these psychoses have in common a family background which, as large-scale statistics show, is different

from that of other disorders and from the average family."

Having outlined what is to be understood by the term schizophrenic, we now turn to the concept of psychogenic causation. The most varied meanings have been given to this concept. In the introduction to his monograph on the psychogenic psychoses, mentioned above, Faergeman discusses its historical development. For our purpose we shall consider "psychogenic causation" as implying causation by exogenous mental influences, without dealing for the moment with the question of how such influence can give rise to psychotic symptoms. It is obvious that here too our previous theoretical convictions will determine what weight we are likely to attach to particular facts as having a bearing on aetiology. If, for instance, the method we use is the "comprehending" psychology associated with the names of Jaspers, Gruhle and Schneider, then the observer's capacity for empathy will determine how far he can assume the presence of a "comprehensible" psychic development, and to what extent he should diagnose an underlying "process" transcending any meaningful interpretation. It is only the contents of a psychosis that can be comprehended; its form and actual phenomena are beyond understanding on such developmental lines; they can only be explained as the result of extra-psychic processes. In Jaspers' view, Freud's error lay in his failure to distinguish between "comprehensible" and "causal" connections between events. It is only if we reject the idea that contents and form in psychosis are unconnected that we can attach importance to psychogenic factors. Then again, in recent work, Häfner has discussed the general assumption that normal psychological development is always "comprehensible", in contrast to pathological processes which invade and disrupt the personality, and he has shown that this view is untenable; for even during a person's normal development process-like features appear from time to time, when the course of development becomes, as it were, a pre-determined and inevitable one, as is seen during biological maturation. Thus, normal development too has its endogenous element, and so have the neuroses and the psychopathic personalities. We see, then, that from this aspect also the concept of psychogenesis becomes problematic if one is thinking only in terms of conscious or unconscious motivation.

These brief indications are in no way meant as a serious discussion of the fundamental concepts of psychopathology. Their purpose was rather to remind the reader once again to what extent theoretical viewpoints determine the choice of the observer's experiences and his attitude towards them. So long as no generally recognized theory of schizophrenia exists, there can be no assessment of its pathology and aetiology that will appear convincing to the majority of investigators. It must therefore be left to the reader to decide how much importance he will attach to the data summarized below as contributing to an explanation of the schizophrenic psychoses.

Before we turn to consider the work dealing with the schizophrenic patient's early environment, we must refer to those investigators who evade the question of psychogenesis by denying that cases in which a mental trauma preceded the onset and which run a benign course are instances of true schizophrenia, and designate them instead as "schizophreniform" states. Most prominent amongst these are the Scandinavian workers, Langfeldt, Welner and Strömgren, Eitinger, Holmboe and Astrup, Faergeman and others. Here belongs also the whole discussion on the "schizophrenic reaction" which was raised over 50 years ago by the publication of Eugen Bleuler's "Dementia Praecox or the Group of Schizophrenias". The literature on this subject has recently been exhaustively reviewed by Rattner. Here again, the individual worker's attitude to the question of a "schizophrenic reaction" implies a parallel attitude to the possibility of a psychogenesis of schizophrenia.

In 1961, Rohr, working in our Clinic, reported on 44 cases of "schizophrenic reaction". The cases were selected according to the following criteria: onset immediately following a grave psychotraumatic situation; symptomatology not distinguishable from that of schizophrenias with an unfavourable course; and termination in recovery within a comparatively short time. The family history was investigated, and in 29 cases the patients were

followed up for between 5 and 11 years; the majority remained in good health for the whole of this time. The findings as regards the families were that there were significantly fewer schizophrenics in the families of the "reaction" patients than in those of "schizophrenics", though there were distinctly more than would be found in families from the normal population. It must be concluded that "schizophrenic reactions" are not to be identified with true schizophrenia, but neither are they to be considered as something entirely different. They appear to occupy a midway position between simple reactive disturbances on the one hand and malignant schizophrenias on the other. Rattner speaks of a "missing link" between neuroses and psychoses, on the analogy of the "missing link" of evolutionary theory.

Survey of the Literature

The literature will be reviewed under five headings:

A. Findings based on the psychotherapy of schizophrenic patients.

B. Investigations on interpersonal relationships in the earlier family life of schizophrenics.

C. Statistical investigations on the frequency of particular traumatic situations (e.g. broken homes).

D. Investigations by various methods (tests, questionnaires, interviews, etc.) on the attitudes of important figures in the immediate environment, especially of parents towards their children, more particularly towards those who become schizophrenic.

E. Other environmental factors, especially social and cultural circumstances.

A. Findings Based on the Psychotherapy of Schizophrenic Patients

The most powerful arguments for attempting to understand schizophrenia on psychogenic lines are based on experience of the psychotherapy of schizophrenic patients. We may recall that Eugen Bleuler (1911) and his co-workers at the Burghölzli gained their insight into the psychological origin of many schizophrenic symptoms by the application of psycho-analytic principles and methods. Treatment was not at that time their main concern; nevertheless some results were achieved, and research into the possibilities of psychotherapy has never since ceased. Chr. Müller has given an account of the history of this work in his article "The Pioneers of Psycho-analytic Treatment in Schizophrenia" (1958). We will mention some of the therapists who have done most to stimulate and influence this work during the last few decades. In the U.S.A. the foremost of these was H. S. Sullivan, and next we may place the staff of the Menninger Clinic, also Frieda Fromm-Reichmann (1950), L. B. Hill (1958), P. Federn (1958) and especially J. Rosen (1953), whose "direct analysis" aroused much discussion. In the German-speaking world, Gertrud Schwing should be mentioned. Working as a Sister in the Vienna Clinic, her experience with schizophrenics led her to attach decisive importance to the assumption by the therapist of a motherly attitude towards the patient as an essential preparation for the actual analytic work: a prerequisite of treatment being that through the therapist's maternal care and affection the patient should now receive some portion of what had never yet been his. In the French-speaking countries, similar lines of thought were represented by M. Sechehaye (1954). The more recent work of Benedetti should also be noted. However, the number of publications does not give an adequate picture of the significance of these methods; many who have worked in this field have not ventured to report their experiences, since these diverged too far from prevalent teaching and opinion. Schultz-Hencke's discussion of the subject (1952) is enlightening.

Now, the therapist who treat schizophrenics must necessarily proceed from the assumption that the psychosis can be "understood" as the expression of a human need and as the result of a damaged process of development. Without this tacit assumption there can be no analytic psychotherapy, but at the most some kind of psychagogic or supportive help applied to the patient's symptoms. But further, in the course of treatment, the therapist gains an increasingly convincing confirmation of his assumption from the wealth of recalled material communicated by

the patient, in part directly, but mainly in concealed and symbolic form. A particularly vivid and detailed account of such a case is given in M. Sechehaye's history of a chronic schizophrenic. There exists by now an abundant case literature, which has been reviewed very fully by M. Bleuler (1951), and by Benedetti, Kind *et al.* (1957, 1962). The more deeply and personally the therapist involves himself with his patient, the more he realizes how fluid are the limits of the "understandable", and how utterances which to a "non-participant observer" seem senseless reveal themselves as a cry for help arising from a psychotically distorted vital need. There is indeed no "objective" proof that this interpretation is the right one; but it is no more "subjective" than is the assertion of "comprehending" psychologists that there is in principle no connection between the form and the content of a psychosis, and that only the latter can be "understood". The quality of being "understandable" is not a property of psychopathological phenomena, but a problem of human relations, its solution depending on the degree to which we can and do abandon the attitude of a non-participating observer and allow ourselves to be personally involved with our patient.

It is true that the rather scanty successes of psychotherapy in schizophrenia cannot serve as a proof of its psychogenesis. It is not possible to dismiss the objection that in these cases there was nothing but a spontaneous remission; and statistically they carry no weight. Their greatest significance lies in their value as examples, in the way they have re-awakened interest in the personality and life story of the individual patient and so have humanized psychiatry. A realistic account of the psychotherapy of schizophrenic patients in the setting of a general psychiatric clinic, based on the follow-up study of 94 patients, has been provided by Müller (1961). Nevertheless, no one today can doubt that individual chronic schizophrenics with poor prognosis have been greatly improved or cured in the course of psychotherapy.

B. Interpersonal Relations in the Family

The work to be reviewed under this heading has been based on intensive and for the most part long-term studies of patients and their families. The most important of these investigations has certainly been that of Lidz, Fleck and their co-workers (1957, 1958, 1959, 1963), of the Yale Psychiatric Institute. The data were gathered in the course of both therapeutic and non-therapeutic interviews with every member of each family studied, as well as with friends of the family, teachers, nursemaids and others; usually hundreds of hours were devoted to each family. According to the authors, not one of these families could be regarded as well integrated; on the other hand the precise nature of this familial disintegration cannot easily be brought under a common denominator. No specific character traits of either the mother or the father were to blame in every case for the observed disturbance of the child-parent relationship; the findings pointed rather to many-sided disharmonies and symptoms of family disruption, arising from variable psychopathological pecularities of the parents. These parental abnormalities appeared to be of much more frequent occurrence than one would have supposed from the results of the many previous investigations into heredity on conventional lines. At least 60 per cent. of the patients are said to have had at least one parent who was an "ambulatory schizophrenic" or else was unequivocally paranoid. In all these families relations between the parents were severely disturbed; often there was an open breach between them, so that one partner was continually trying to force the other into subordination to his rigid demands. In other cases, some sort of harmony was conditional on a distortion of the family structure, whereby the partner who showed psychopathological symptoms assumed an abnormal role which was acquiesced in or even shared by the other. Such relationships made it impossible for the children to identify with one of the parents without coming into conflict with the other, and led to their taking over the parents' distorted interpretation of reality. Among the mothers there was a striking lack of mutuality with their children, an incapacity to understand what the child was trying to express, and a strong tendency to nag and interfere. These mothers were apt to react to their own needs as if they were the needs of their children; often their own compulsive anxieties

made them excessively strict, or on the contrary they showed excessive indulgence arising from their own insecurity. Nor were matters better with the fathers: without exception they had given up their natural task within the family and did nothing but upset the mother's relationship with the children. It appeared further that in the families with schizophrenic daughters it was the mothers who had failed most lamentably, while in those with schizophrenic sons it was the fathers.

This work by Lidz and his colleagues is unequalled for thoroughness; but similar results have been obtained by others. Thus, Gerard and Siegel selected 71 male schizophrenics admitted to Brooklyn State Hospital in 1948–49 and questioned their relatives about family conditions during the patients' early years; the questioning took an average of three hours divided into two sessions. The results were compared with a control group of apparently healthy students. Family relationships were found to be much more abnormal for the schizophrenic group, but no specific kind of disturbance emerged. The mothers of the schizophrenic subjects were much more often found to be insecure people, inclined to spoil their children, and overprotective and ambivalent towards them. Often the patient had been looked on by his parents as something "special", and they entertained exaggerated expectations about him or sought in him a substitute for another child they had lost. On the other hand there was no difference between the two groups in respect of such data as duration of breast-feeding, age of achieving sphincter control, or frequency of a broken home.

Delay, Deniker and Green (1957) made a similar investigation; their subjects were 50 male schizophrenic in-patients, and the relatives were each given at least two 45-minute interviews. They too found a preponderance of abnormal personalities among the patients, including a "psychotic character" which, although no overt psychosis, contained elements which they felt to be reminiscent of a psychosis. In their case-material instances of actual or affective failure on the father's part were especially frequent, as also were examples of reversal of the roles of the mother and father during the patient's childhood. There was no control group.

Kisker and Strötzel (1962) based an analysis of the early familial situation of schizophrenics on information obtained not only from the relatives but also from the patients themselves. They compared 36 young schizophrenic in-patients of the University Clinic in Heidelberg with 21 patients of similar age admitted for other psychiatric conditions. They found that the childhood environment of the schizophrenic patients differed from that of the control group in a way which, though not specific, could yet be regarded as typical. Hidden conflicts within the family were frequently noted, and what was even more striking was the occurrence of a rigid system of roles which made it difficult for the patient to free himself from the parental tie. No specific types of parents could be recognized. In his childhood the future schizophrenic already possesses the characteristics of "covert harshness and moral inflexibility". In contrast to this, there were found in the control group "stable defensive attitudes, involving open action and protest, aggression, exhibitionistic narcissism" and similar manifestations. Nearly two-thirds of the schizophrenic illnesses could be regarded as having been precipitated by this setting of family tensions, and in some of them there was a close relationship between the family situation and the onset of schizophrenia.

A different method, as fruitful as it was unusual, was used by Bowen (1960). Patients, their parents, and where possible their brothers and sisters as well, were admitted simultaneously to a special ward at the National Institute of Mental Health, and the family shared quarters in common. The patients were all chronic schizophrenics who had been ill for several years. Seven families were observed and treated over an average of 18 months. Here too, the families were found to be poorly integrated, and there were serious marital disharmonies, with their inevitable effect on the children; and what was most remarkable was that improvement in the patient's condition was often observed in association with an improvement in the emotional harmony between the parents.

At the Mayo Clinic, another research team (Johnson *et al.*, 1956; Beckett *et al.*, 1956) have

likewise carried out psychotherapeutic treatment simultaneously on schizophrenic patients and on their parents, and compared their observations. In this group of 27 recent cases, it appeared that the patients had in their early years been subjected with more than chance frequency to physical or psychic assaults, which though not usually of a serious degree nevertheless had a homicidal, castrating or incestuous character, and the nature of these assaults was often reflected in the patient's delusions.

Aronson and Polgar (1962) investigated a group of 13 schizophrenics, members of the U.S. Army, and by intensive questioning of military personnel who had had contact with them showed that other environmental groupings, e.g. in the armed services, could have a similar influence to that of the family. In these cases the onset of the psychosis was closely connected with the patient's relationship to the most important person in the environment.

Elsaesser (1952), in his case material of 31 children of 9 doubly-schizophrenic parents, states that the 6 who themselves became schizophrenic had in their early years been subjected to greater stress than those who remained well.

These studies, carried out in different countries and by workers of different schools of thought, thus show unequivocally that the great majority of schizophrenics, if not all, who have been thoroughly investigated come from families in which relationships are severely disturbed. When, therefore, one reads in so many case-histories that "family background presented no special features", it is because their statements are based on quite superficial assessments, of no value as evidence. The present writer knows of no work carried out with the same thoroughness as those cited which has come to essentially different conclusions. On the contrary, Ernst, working in our Clinic, made a careful review, including domiciliary interviews with relatives, of those cases in which routine case-taking had reported "no special features in family background", and found that these families were in reality severely disturbed and that the patients had borne the weight of oppressive intra-familial conflicts. Ernst's investigation covered 50 female schizophrenics who had been under his own care; in 7 cases there were no adequate data, and in 35 routine case-taking had already shown disturbed family relations. The remaining 8 had been reported as having "normal" families, but this further investigation showed that in 7 cases family life was severely disturbed, and only one family could be regarded as moderately integrated.

Nevertheless, the interpretation of these findings is as yet far from clear. There have not as yet been enough studies, carried out with the same thoroughness, on the family environment of sufferers from other forms of mental illness, and on the other hand the delimitation of what we can still consider a "normal family" is quite uncertain. One must also take observer bias into account, the existence of a schizophrenic member influencing the investigator towards finding "disturbed" relationships which would otherwise be considered within normal limits. Further, most workers have emphasized that the disturbances they have found have nothing specific about them, but either seem to differ only quantitatively from those found in the families of neurotic or even of healthy subjects, or perhaps show a more or less typical "colouring".

C. Statistical Investigations into the Frequency of Certain Traumatic Situations

Work along this line has been directed towards establishing the frequency with which psychotraumatic events occur in the history of schizophrenic patients compared with control groups of normal persons or of patients with other forms of psychiatric illness. However, no real contributions to our present aetiological problem can be expected from such studies, for a number of reasons. In the first place, most of these investigations have been based on routine case histories taken on in-patients, and these have no high reliability. Secondly, essential data, such as the age at which the patient lost one of his parents, are often neglected. But the most serious objection is that these investigations are based on the unlikely expectation that single defined misfortunes or psychic traumata are particularly apt to bring about the faulty development which ends in schizophrenia. Yet in psychoanalysis the original traumatic theory of the neuroses has long since been much restricted

in its scope, if not abandoned altogether, it having been recognized that long-standing stresses and especially disturbed interpersonal relationships in childhood have a far more lasting influence on personality development.

Discovering a broken home tells one nothing about the significance of such an event for a schizophrenic's life history; still less can the absence of such misfortunes imply that the patient grew up in a normal family environment.

Statistical studies bearing on the frequency in the history of schizophrenics of such events as the loss of a parent or sib in early life, or the break-up of a family through separation or mental illness, have been made by Andreani (1956), Barry (1949), Blum and Rosenzweig (1944), Ellison and Hamilton (1949), Hamilton and Wall (1949), Hilgard and Newman (1963), Huber (1954), Illberg (1961), Lidz and Lidz (1949), Morf (1962), Nielsen (1954), Oltman, McGarry and Friedman (1952), Plank (1953), Pollock, Malzberg and Fuller (1939), Rosenzweig and Bray (1943), Wahl (1954). It would not be profitable to reproduce here the published figures, since they are too heterogeneous, and their interpretation is dependent on too many factors. Some of these authors went beyond a consideration of the break-up of families through death or separation, and used the data of their case histories to attempt an assessment of the parent-child relationship in each case; this they classified into categories such as 'favourable—unfavourable' or 'rejection—overprotection'. Where comparisons have been made with other groups of psychiatric patients, it has generally been found that schizophrenics do not come from disrupted families any more frequently than do other patients, but that some differences between them and normal controls do exist. However there are some divergent findings: Pollock and his co-workers found a broken home twice as often among schizophrenics as among manic-depressives, and both Oltman *et al.* and Nielsen report about as many instances of broken homes and of unfavourable family relationships in their normal controls as in their schizophrenic patients.

Gregory (1959) has drawn attention to the statistical deficiencies of some of these studies, e.g. failure to compare the mortality among patients' parents with that of the corresponding age group in the population, or faulty composition of the groups of probands. Nevertheless after taking these factors into account, these studies do give an impression that in schizophrenics and neurotics there is more often a history of family disruption.

Kohn and Clausen investigated social isolation in the early history of schizophrenics by questioning in-patients about their human contacts and early life habits. Compared with a normal control group the schizophrenics had merely more frequently led solitary lives, but no more than a comparable group of manic-depressives. Kay and Roth (1961) ascribe a pathogenic effect to social isolation in a study of 99 patients with late paraphrenia. This social isolation was caused among other things by deafness, abnormal personality traits and absence of any close relatives, and was more marked than in a control group of patients with affective psychoses.

D. The Personalities of Parents under Test

In this section we will consider studies which aim at assessing the personalities of a group of mothers, or of both parents, of schizophrenics. At the root of these investigations lies the concept of the "schizophrenogenic mother", and they aim at verifying this hypothesis. The concept itself arose in the course of analytic work with schizophrenics, and appears to have been created by Frieda Fromm-Reichmann. Many therapists had in fact become convinced that their patients' mothers had exercised a harmful influence on them in their early years. However, as we have seen, the insight which the therapist gains for himself is by no means so evident to the outsider—hence, the need to investigate such relationships "objectively", and if possible to establish them statistically. A whole series of authors have set about this task by extracting from the case records of groups of hospitalized schizophrenics—unselected where possible—the information relating to the personalities of the parents and their attitudes to the patient in childhood. Among these authors are Andreani (1956), Ellison and Hamilton (1950), Hamilton and Wall (1949), Kasanin, Knight and Sage

(1934), Lidz and Lidz (1950), Nuffield (1954), Wahl (1954, 1956). A somewhat different approach is that of Reichard and Tillman (1950), who studied a series of 13 cases whom they themselves had treated by psychotherapy, together with 66 similarly-treated cases from the literature.

All these authors came to the conclusion that in a high proportion of cases (mostly 50–60 per cent., often higher) the mothers had shown an unhealthy, immature attitude towards their children, especially towards those who later became schizophrenic, an attitude described as "rejecting", especially "covertly rejecting", or else as "overprotective". Many of these mothers were stated to have personalities which were on the one hand anxious and insecure, on the other aggressive and unfriendly. In some of these works the fathers are also referred to, and they too are found to be deviant personalities with unnatural attitudes towards their children. Wolman (1961) concerned himself specially with the fathers of his schizophrenic patients and found evidence of failure and of reversal of roles similar to the instances already described; in some of these cases much stress was inflicted upon the children by their being compelled to adopt a protecting and yielding attitude towards their fathers.

Nuffield compared his results with a control group of mothers of neurotics and found that the mothers of schizophrenics were often abnormal. Against this, Prout and White (1950) found no significant differences between the mothers of 25 schizophrenic in-patients and those of a non-schizophrenic control group.

Fisher, Boyd, Walker and Sheer (1959), Freeman and Grayson (1955), Goldstein and Carr (1956), Mark (1953) have attempted to elucidate the personalities of the mothers of schizophrenics and their attitudes towards their children by means of specially framed tests or questionnaires, comparing the results with those obtained from the mothers of physically ill patients or from neurotics. Fisher *et al.* found that the parents of the mentally normal control group were better adapted to each other and enjoyed a more harmonious married life. The investigations of Mark and of Freeman and Grayson can be regarded as methodologically sound. Mark presented the mothers of 100 schizophrenics with a list of carefully selected statements expressing attitudes to a number of problems of upbringing, and found that these mothers' reactions were significantly different on many points from those of the mothers of the physically ill controls; they were more restrictive in their control of the child, and affectively they tended towards extremes of either cool detachment or excessive devotion. Freeman and Grayson, using the same method, observed that the mothers of schizophrenic patients showed a significant excess of undesirable attitudes on matters of upbringing, tending towards domination and possessiveness; what appeared to be particularly characteristic of them was an attitude of self-sacrifice behind which was concealed their urge to dominate.

Singer and Wynne (1963) go much further, and are convinced that by means of the Rorschach and TAT they can tell the parent of a schizophrenic from that of a neurotic patient without knowing anything of the case. Such communications must be received with interest but very sceptically until other research teams have reported comparable results; it should be remembered that these authors' paper is based on only two series of 20 patients each.

The most careful and thorough work on the personalities of the mothers of schizophrenics is probably that of Tietze (1949) and Alanen (1958). Tietze took an average of 6·6 interviews of 50 minutes duration with the mothers of 25 schizophrenic in-patients with the object of ascertaining their attitudes towards their own children, towards the bringing-up of children in general and towards their personal problems. She found that all the mothers were over-anxious, and were restrictive and dominating towards their children. Many showed an attitude of rejection towards the schizophrenic child. She describes a particular kind of gentle yet restrictive control and domination exercised under the cloak of self-sacrificing mother love, which she believes to have had specially devastating effects upon the children. It was noteworthy that these mothers had apparently themselves been brought up by their parents on the same principles, rigid and essentially hostile to the child.

Alanen, working on a substantially larger case-material, came to similar conclusions. He personally investigated the mothers of 100 patients admitted to the University Psychiatric Clinic in Helsinki, who were all under 30 years old and were suffering from schizophrenia or from a schizophreniform psychosis in Langfeldt's sense. His control group consisted of 20 neurotics from a general medical ward and 20 healthy medical students and student nurses. Of the 100 mothers of schizophrenics, 84 had serious disturbances of at least neurotic severity, with anxiety and aggressiveness as the most prominent features. In the neurotic control group only two mothers were abnormal, and in the healthy control group only one. Fifty-five of the schizophrenics' mothers had been particularly embittered or anxious at the time of the patient's birth or during his early childhood, generally because of marital conflict, husband's unfaithfulness or jealousy. Early relationships between mother and child had been characterized by anxiety and aggression, and this had been more pronounced in the case of the children who became the typical schizophrenics than in those who later suffered from schizophreniform psychosis. From the mothers' descriptions, it also seemed likely that the birth and early childhood of the future patients had coincided more often with a difficult period of their mothers' life than was the case with the normal children. This author, like others, finds it typical for a schizophrenic's mother to have a dominating and uncomprehending attitude towards the child, lacking understanding of his feelings and needs. This again seemed to be more pronounced and more frequent with the typically schizophrenic than with the schizophreniform patients.

The problem with such investigations is of course the inescapable one of how a disturbance of human relations can possibly be evaluated quantitatively. How can one measure a mother's anxiety or aggression towards her child so as to form a basis for statistics? An observer's judgment can so easily be biased by his expectations and prejudices. Accordingly, one should not make too much of the published figures. However, one cannot overlook the fact that all these investigations have produced similar results as regards the mothers of schizophrenics, and as Lidz and Wolman have shown, for the fathers also.

E. Other Environmental Factors, Especially Social and Cultural Conditions

Many authors have made estimates of the incidence of schizophrenia in the various social strata of the population. The most comprehensive investigation in recent years has been that of Hollingshead and Redlich (1958). They tried to include all mentally ill persons who during the second six months of 1950 were resident in New Haven and were receiving either out-patient or in-patient treatment. At the same time they ascertained the distribution and numbers of the different social classes in the same area by means of a random sampling of households. There was found to be a correlation between social origin and incidence of mental disorder. Schizophrenia was found to be 11 times more frequent in the lowest of five social classes than in the two uppermost; for the affective psychoses the correlation was reversed. Further analysis showed that the preponderance of schizophrenia in the lowest class was not due to the patients' own decline in social level; on the contrary, before the onset of their psychosis schizophrenics tend rather to rise above the social level of their family. Similar observations have been made by Faris and Dunham in Chicago and by Hare in Bristol, but there appears to be no simple explanation of this phenomenon. We may be sure, however, that the psychohygienic climate is worst in the lowest class and that disorganized family relationships are more common. It is true that these observations have been contradicted by other workers' experience. Zerbin-Ruedin (1959), for example, has pointed out that her results do not confirm those of Hollingshead and Redlich. It may be, therefore, that different correlations exist in different regions or countries.

Still earlier it had been observed by Malzberg (1936, 1962) and by Ødegaard that foreign-born immigrants to the U.S.A. had a proportionately higher share in the admissions of schizophrenics to psychiatric hospitals than native-born members of later generations of the same foreign origin. Ødegaard was of opinion that the

difference could be attributed to the fact that a schizoid personality predisposes to emigration. However, Braatoy (1937) pointed out that these migrants also had a higher total mortality and a higher suicide rate, these being signs of unfavourable living conditions. In Hawaii, Wedge (1952) found that of all racial groups the Okinawans had the highest percentage of schizophrenic admissions in proportion to their numbers, while in their own homeland it is asserted that schizophrenia is remarkably uncommon; however no reliable figures are given in support of this last assertion. The argument is that in their own land the Okinawans are a people whose mental life is remarkably harmonious, whereas in Hawaii they form a despised minority among whom shy and sensitive, and also aggressive, overcompensating individuals accumulate.

No far-reaching conclusions should be drawn from these and similar works; nevertheless one may gain the impression that, if any differences at all can be noted in the incidence of schizophrenia as between different populations or social groups, the tendency is for increased frequency of schizophrenia to correlate with a poorer social status and less favourable living conditions.

Discussion and Conclusions

The works reviewed form only an incomplete selection from the vast wealth of published work concerned in one form or another with the problem of the psychological aetiology of schizophrenia. We have deliberately excluded works consisting of purely theoretical discussions unaccompanied by verifiable facts or detailed observations. Their name is legion.

Let us now attempt to draw what lessons we can from the works reviewed:

1. If the definition of schizophrenia is not restricted to cases ending in deterioration, but includes also cases of similar symptomatology but different course, then we may say that there is a group of schizophrenic psychoses whose onset stands in close relation with a psychic trauma, and often in such a way that psychotraumatic situation and psychotic symptoms are meaningfully connected. These psychoses proceed to recovery. They are usually designated as schizophrenic reactions. Their fundamental significance lies in demonstrating that schizophrenic symptomatology can to all appearances be set going by psychic stress.

2. The intensive psychotherapeutic efforts which have been made in the last decades from the psychoanalytic side have taught us that, even in chronic patients of unfavourable prognosis, schizophrenic symptoms can be understood as expressions of inner need and anxious self-defence; and that in the course of psychotherapeutic treatment of single cases these symptoms may change or even vanish. The fundamental significance of the psychotherapy of schizophrenics lies in recognizing that even a chronic and malignant psychosis is no impersonal stroke of fate, but a manifestation of the individual patient's destiny in its most personal and intimate sense.

3. Whenever the family relationships and childhood circumstances of schizophrenics have been carefully examined, one discovers that these human beings have grown up in emotionally stressful circumstances. Intrafamilial relationships especially are often grossly disturbed; and it is rarely possible to find a family, with one member schizophrenic, which is harmoniously integrated. Apart from the tensions that one often finds underlying unremarkable superficial appearances, schizophrenic patients (like psychiatric patients of other kinds) often come from grossly disorganized families, or families which for a variety of reasons have broken up. There is nothing in any way specific for schizophrenia in the mode of intrafamilial disturbance of relationships, nor in the timing or grounds for the break up of the family. The hypothesis of the schizophrenogenic mother or parent has not been given an adequate basis by the research data so far obtained. One must however suppose that, more often than mothers of normal children, the mothers of schizophrenics bring up their children on principles that are hostile and unfavourable to them.

4. In particular districts or regions schizophrenics have been found to originate in the lowest social classes much more frequently than in the higher levels. It would seem also that schizophrenia is more frequent in population

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groups, such as immigrants, that are subjected to severer degrees of social and psychological tension.

In the formulations most usually adopted, psychogenesis is distinguished from somatogenesis on one side and genetic causation on the other. We are not here concerned with the former alternative and can confine ourselves to consideration of the latter. No theory of schizophrenia would be possible which did not postulate a constitutional predisposition. However, so much is true of any other psychic disturbance. Twin research and family investigations make a constitutional factor seem probable. Nevertheless, all attempts so far to equate this predisposition with a particular mode of inheritance must be regarded as having failed; and on that account a specific genetic factor appears unlikely. Moreover, the results of twin research, which seemed so secure, have been called into question. The high concordance in monozygotic twins, found by Kallmann and Slater among others, used to be accounted one of the strongest supports for the genetical causation in schizophrenia. After the publication of Tienari's work (1963), based on an extensive case-material in Finland, one must suppose that the previously ascertained concordance figures were selectively biased because the earlier workers obtained their twins from hospitalized cases; Tienari, on the other hand, collected a sample defined geographically on the basis of the birth register, and he found not a single concordant case among the 16 MZ twin partners of schizophrenics. So that if we cannot think in terms of a specific genetical predisposition for schizophrenia, yet we can conceive of familial susceptibilities which when they come into conjunction with corresponding noxae set the pathological process going.

M. Bleuler (1953, 1962, 1963) has advocated this point of view, and has repeatedly expressed his opposition to both purely genetical and one-sidedly environmental research, maintaining that genetical predisposition and environment cannot be investigated in isolation from each other because they are inextricably interwoven. Today we recognize that a raised familial incidence does not signify genetical causation, as seemed self-evident a few decades ago. So it has come to pass that the very findings which formerly were taken as a proof of genetical causation in schizophrenia are now regarded as a proof of psychogenesis. Even the earlier genetical investigators noticed how commonly deviant and schizoid personalities appeared in the families of schizophrenics. Modern investigators of the family, such as Lidz and his group, are not tied down to the bare description and statistical analysis of character traits, but turn their attention to intrafamilial dynamic events. It then emerges that the parents are not merely the passive transmitters of genetical predispositions, but actively shape their children's mode of life, and thus their personality, by their emotional and intellectual relationships with them. In the retrospective view of the understanding investigator, and particularly the psychotherapist, the psychosis appears as the natural consequence of chronic stresses in a pathogenic environment. Even this view requires the hypothesis of an inborn susceptibility. The antithesis of psychogenesis and purely genetically determined process is untenable: we have to take note of an indissoluble interaction of environmental and genetical factors.

Jackson (1960) has discussed this interaction in his critique of the results of twin research. It is noteworthy, for example, that dizygotic twins have a higher concordance than other sibs, though genetically just as different. Furthermore, like-sexed DZ have a higher concordance than opposite-sexed twins, and, according to Jackson, among DZ twins pairs of sisters have a higher concordance than pairs of brothers. These differences could only be explained by a greater feeling of identity in the more concordant classes of pairs, or perhaps their greater similarity in the eyes of those around them. It is just these problems of identification and identity which seem to play such an important part in the psychological development of the schizophrenic. The MZ quadruplets described by Wynne, Day, Hirsch and Ryckoff (1959) should be referred to in this connection.* They all had schizophrenic psychoses, but the psychotic pictures

* Since writing this survey the writer has become acquainted with D. Rosenthal's book (1963) on these schizophrenic quadruplets. It must be regarded as one of the most important works we have, dealing with the mutual action of disposition and environment in the aetiology of schizophrenic psychoses.

were very different and bore a close relationship to the personality development and the role in the family of each of the four sisters.

What then are the conclusions we can draw from the present state of our knowledge? Environmental factors, particularly those arising within the close family circle, are more important than we used to believe during the lengthy period when we were under the influence of a one-sided genetical theory. It is only differentiated research, which takes the psychodynamic aspects into account, that can grasp the peculiarities of the family environment, and possibly enable one to recognize pathogenic factors. Inborn predisposition and environmental influence can only be approached by way of their interactions. A purely psychogenic theory of schizophrenia is, accordingly, just as untenable as a purely genetical one. We should abandon this one-sided and barren either-or, and in future turn to a deeper and many-sided study of single cases, whole families, or groups of patients of like kind.

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