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## Notes on Some Schizoid Mechanisms<sup>1</sup>

Melanie Klein

### INTRODUCTORY REMARKS

To-night I am going to touch on a vast and relatively obscure topic, and the present paper is necessarily in the nature of preliminary notes. I had given much thought to this subject for many years, even before I came to clarify my views on the depressive processes in infancy. In the course of working out my concept of the infantile depressive position, however, the problems of the phase preceding it again forced themselves on my attention. I now wish to formulate some hypo-theses at which I have arrived regarding the earlier anxieties and mechanisms.

The hypotheses I shall put forward, which relate to very early stages of development, are derived by inference from material gained in the analyses of adults and children, and some of these hypo-theses seem to tally with observations familiar in psychiatric work. To substantiate my contentions would require an accumulation of detailed case material for which there is no room in the frame of this paper, and I hope in further contributions to fill this gap.

At the outset it will be useful to summarize briefly the conclusions regarding the earliest phases of development which I have already put forward (see particularly Klein, 1932) and (1935).

In early infancy anxieties characteristic of psychosis arise which drive the ego to develop specific defence mechanisms. In this period the fixation points for all psychotic disorders are to be found. This hypothesis led some people to believe that I regarded all infants as psychotic; but I have already dealt sufficiently with this misunderstanding on other occasions. The psychotic anxieties, mechanisms and ego defences of infancy have a profound influence on development in all its aspects, including the development of the ego, super-ego and object relations.

I have often expressed my view that object relations exist from the beginning of life, the first object being the mother's breast which is split into a good (gratifying) and bad (frustrating) breast; this splitting results in a division between love and hate. I have further suggested that the relation to the first object implies its introjection and projection, and thus from the beginning object relations are moulded by an interaction between introjection and projection, between internal and external objects and situations. These processes participate in the building up of the ego and super-ego and prepare the ground for the onset of the Oedipus complex in the second half of the first year.

From the beginning the destructive impulse is turned against the object and is first expressed in phantasied oral-sadistic attacks on the mother's breast which soon develop into onslaughts on her body by all sadistic means. The persecutory fears arising from the infant's oral-sadistic impulses to rob the mother's body of its good contents, and the anal-sadistic impulses to put his excrements into her (including the desire to enter her body in order to control her from within), are of great importance for the development of paranoia and schizophrenia.

I enumerated various typical defences of the early ego, primarily the mechanisms of splitting the object and the impulses, idealization, denial of inner and outer reality and stifling of emotions. I also mentioned various persecutory fears, including the fear of being poisoned and devoured. Most of these phenomena—prevalent in the first few months of life—are found in the later symptomatic picture of schizophrenia.

This early period I described as the 'persecutory phase', or rather 'paranoid position' as I termed it later. I thus held that preceding the depressive position there is a paranoid position. If persecutory fears are very strong, and for this reason as well as others the infant cannot work through the paranoid position, then the working

It has been decided to reorganise the Editorial Staff of this Journal so that in future it will consist of one Editor and two Assistant Editors. Unfortunately it was impossible for the American Psycho-Analytical Association to decide on its own plans in time, so that the reorganisation has had to proceed without waiting further, but it is much hoped that it will co-operate in the new venture. It is unnecessary to add that the same applies to all other Psycho-Analytical Societies and Institutes.

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through of the depressive position is in turn impeded. This failure may lead to a regressive reinforcing of persecutory fears

<sup>&</sup>lt;sup>1</sup> Read before the British Psycho-Analytical Society on December 4, 1946.

and strengthen the fixation points for severe psychoses (that is to say, the group of schizophrenias). Again the outcome of severe difficulties arising during the period of the depressive position may be manic-depressive disorders in later life. I also concluded that in less severe disturbances of development the same factors strongly influence the choice of neuroses.

While I assumed that the outcome of the depressive position depends on the working through of the preceding phase, I nevertheless attributed to the depressive position a central rôle in the child's early development. for with the introjection of the object as a whole the relation to the object alters fundamentally. The synthesis between the loved and hated aspects of the complete object gives rise to feelings of mourning and guilt which imply vital advances in the infant's emotional and intellectual life. This is also a crucial juncture for the choice of neurosis or psychosis. To all these conclusions I still adhere.

## SOME NOTES ON FAIRBAIRN'S RECENT PAPERS

In a number of recent papers (1941), (1944), (1946) Fairbairn has given much attention to the subject-matter with which I am dealing to-night. I therefore feel it necessary to clarify some essential points of agreement and disagreement between us. It will be seen that some of the conclusions which I shall present in this paper are in line with Fairbairn's conclusions, while others differ fundamentally. Fairbairn's approach is largely from the angle of ego development in relation to objects, while mine was predominantly from the angle of anxieties and their vicissitudes. He calls the earliest phase the 'schizoid position' and states that it forms part of normal development and is the basis for adult schizoid and schizophrenic illness. I agree with this contention and consider his description of developmental schizoid phenomena as significant and revealing, and of great value for our understanding of schizoid behaviour and of schizophrenia. I also consider Fairbairn's view that the group of schizoid or schizophrenic disorders is much wider than has been acknowledged, as correct and important; and the particular emphasis he lays on the inherent relation between hysteria and schizophrenia deserves full attention. His term 'schizoid position' seems adequate if it is meant to cover both persecutory fear and schizoid mechanisms.

I disagree—to mention first the most basic issues—with his revision of the theory of mental structure and instincts. I also disagree with his view that to begin with only the bad object is internalized—a view which seems to me to contribute to the important differences between us regarding the development of object relations as well as ego development. For I hold that the introjected good breast forms a vital part of the ego, exerts from the beginning a fundamental influence on the process of ego development and affects both ego structure and object relations. I also dissent from Fairbairn's view that 'the great problem of the schizoid individual is how to love without destroying by love, whereas the great problem of the depressive individual is how to love without destroying by hate' (cf. Fairbairn, 1941, 271). This conclusion is in line not only with his rejecting the concept of primary instincts but also with his under-rating of the rôle which aggression and hatred play from the beginning of life. As a result of this approach, he does not give enough weight to the importance of early anxiety and conflict and their dynamic effects on development.

## SOME PROBLEMS OF THE EARLY EGO

In the following discussion I shall single out one aspect of ego development and I shall deliberately not attempt to link it with the problems of ego development as a whole. Nor can I here touch on the relation of the ego to the id and super-ego.

We know so far little about the structure of the early ego. Some of the recent suggestions on this point have not convinced me: I have particularly in mind Glover's concept of ego nuclei and Fairbairn's theory of a central ego and two subsidiary egos. More helpful in my view is Winnicott's emphasis on the unintegration of the early ego (cf. Winnicott, 1945).<sup>2</sup> I would also say that the early ego lacks cohesiveness and that a tendency towards integration alternates with a tendency towards disintegration, a falling into bits. I think that these fluctuations are characteristic of the first few months of life.

We are, I think, justified in assuming that some of the functions which we know from the later ego are there in the beginning. Prominent amongst these functions is that of dealing with anxiety. I hold that anxiety arises from the operation of the Death Instinct within the organism, is felt as fear of annihilation (death) and takes the form of fear of persecution. The fear of the destructive impulse seems to attach itself at once to an object—or rather it is experienced as fear of an uncontrollable overpowering object. Other important sources of primary anxiety are the trauma of birth (separation anxiety) and frustration of bodily needs; and these experiences too are from the beginning felt to be caused by bad objects. Even if these objects are felt to be external, they become through introjection internal persecutors and thus reinforce the fear of the destructive impulse within.

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The vital need to deal with anxiety forces the early ego to develop some primary mechanisms and defences. The

<sup>&</sup>lt;sup>2</sup> In this paper Dr. Winnicott also described the pathological outcome of states of unintegration, for instance the case of a woman patient who could not distinguish between her twin sister and herself.

destructive impulse is partly projected outwards (deflection of the Death Instinct) and attaches itself at once to the primary external object, the mother's breast. As Freud has pointed out, the remaining portion of the destructive impulse is to some extent bound by the libido within the organism. However, neither of these processes entirely fulfil their purpose, and therefore the anxiety of being destroyed from within remains active. It seems to me in keeping with the lack of cohesiveness that under the pressure of this threat the ego tends to fall to bits. This falling to bits appears to underlie states of disintegration in schizophrenics.

The question arises whether some active splitting processes within the ego may not enter even at a very early stage. As we know, the early ego splits the object and the relation to it in an active way, and this may imply some active splitting of the ego itself. In any case, the result of splitting is a dispersal of the destructive impulse which is felt as the source of danger. I suggest that this primary anxiety of being annihilated by a destructive force within, with the ego's specific response of falling to bits or splitting itself, may be extremely important in all schizophrenic processes.

# SPLITTING PROCESSES IN RELATION TO THE OBJECT

The destructive impulse projected outwards is first experienced as oral aggression. I believe that oral-sadistic impulses towards the mother's breast are active from the beginning of life, though with the onset of teething the cannibalistic impulses increase in strength—a factor stressed by Abraham.

In states of frustration and anxiety the oralsadistic and cannibalistic desires are reinforced, and then the infant feels that he has taken in the nipple and the breast, in bits. Thus in addition to the division between one good and one bad breast in the young infant's phantasy, the frustrating breast—attacked in oral-sadistic phantasies—is felt to be in bits; while the gratifying breast, taken in under the dominance of the sucking libido, is felt to be complete. This first internal good object acts as a focal point in the ego. It counteracts the processes of splitting and dispersal, makes for cohesiveness and integration, and is instrumental in building up the ego.<sup>3</sup> The infant's feeling of having inside a good and complete breast may, however, be shaken by frustration and anxiety. As a result, the division between the good and bad breast may be difficult to maintain, and the infant may feel that the good breast too is in bits.

I believe that the ego is incapable of splitting the object—internal and external—without correspondingly a splitting within the ego taking place. Therefore the phantasies and feelings about the state of the internal object influence vitally the structure of the ego. The more sadism prevails in the process of incorporating the object, and the more the object is felt to be in bits, the more the ego is in danger of being split in relation to the internalized object bits.

The processes I have described are, of course, bound up with the infant's phantasy life; and the anxieties which stimulate the mechanism of splitting are also of a phantastic nature. It is in phantasy that the infant splits the object and the self, but the effect of this phantasy is a very real one, because it leads to feelings and relations (and later on thought processes) being in fact cut off from one another.<sup>4</sup>

## SPLITTING IN CONNECTION WITH INTROJECTION AND PROJECTION

I have so far particularly dealt with the mechanism of splitting as one of the earliest ego mechanisms and defences against anxiety. Introjection and projection are from the beginning of life also used in the service of this primary aim of the ego. Projection, as we know from Freud, originates from the deflection of the Death Instinct outwards and in my view helps the ego in overcoming anxiety by ridding it of danger and badness. Introjection of the good object is also used by the ego as a defence against anxiety.

Closely connected with projection and introjection are some other mechanisms. Here I am particularly concerned with the connection between splitting, idealization and denial. As regards splitting of the object, we have to remember that in states of gratification love feelings turn towards the gratifying breast, while in states of frustration hatred and persecutory anxiety attach themselves to the frustrating breast. This twofold relation, implying a division between love and hatred in relation to the object, can only be maintained by splitting the breast into its good and bad aspects.

With the splitting of the object, idealization is bound up, for the good aspects of the breast are exaggerated as a safeguard against the fear of the persecuting breast. Idealization is thus the corollary of persecutory fear, but it also springs from the power of the instinctual desires which aim at

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<sup>&</sup>lt;sup>3</sup> Winnicott (1945) referred to the same process from another angle when he described how integration and adaptation to reality depend essentially on the infant's experience of the mother's love and care.

<sup>&</sup>lt;sup>4</sup> In the discussion following the reading of this paper Clifford Scott referred to another aspect of splitting. He stressed the importance of the breaks in continuity of experiences, which imply a splitting in time rather than in space. He referred, as an instance, to the alternation between states of being asleep and states of being awake. I fully agree that splitting is not to be understood merely in terms of space and that the breaks in continuity are very essential for the understanding of schizoid mechanisms.

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unlimited gratification and therefore create the picture of an inexhaustible and always bountiful breast—an ideal breast.

A good instance of such division is the infantile hallucinatory gratification. The main processes which come into play in idealization are operative in the hallucinatory gratification, namely the splitting of the object and the denial both of frustration and of persecution. The frustrating and persecuting object is kept widely apart from the idealized object. However, the bad object is not only kept apart from the good one but its very existence is denied as is the whole situation of frustration and the bad feelings (pain) to which frustration gives rise. This is bound up with denial of psychic reality. The denial of psychic reality becomes possible only through the feeling of omnipotence—which is characteristic of the infantile mind. Omnipotent denial of the existence of the bad object and of the painful situation is in the unconscious equal to annihilation by the destructive impulse. It is, however, not only a situation and an object which is denied and annihilated—it is an object relation which suffers this fate; and therefore a part of the ego, from which the feelings towards the object emanate, is denied and annihilated as well.

In hallucinatory gratification therefore two interrelated processes take place: the omnipotent conjuring up of the ideal object and situation, and the equally omnipotent annihilation of the bad persecutory object and the painful situation. These processes are based on splitting the object and the ego.

In passing I would mention that in this early phase splitting, denial and omnipotence play a rôle similar to that of repression at a later stage of ego-development. In considering the importance of the processes of denial and omnipotence at a stage which is characterized by persecutory fear and schizoid mechanisms, we may remember the delusions in schizophrenia, both of grandeur and of persecution.

So far, in dealing with persecutory fear, I have singled out the oral element. However, while the oral libido still has the lead, libidinal and aggressive impulses and phantasies from other sources come to the fore and bring about a confluence of oral, urethral and anal libidinal and aggressive desires. Also the attacks on the mother's breast develop into attacks of a similar nature on her body, which comes to be felt as it were as an extension of the breast, even before the mother can be conceived of as a complete person. The phantasied attacks on the mother follow two main lines: one is the predominantly oral impulse to suck dry, bite up, scoop out and rob the mother's body of its good contents. (I shall discuss the bearing of these impulses on the development of object relations in connection with introjection.) The other line of attack derives from the anal and urethral impulses and implies expelling dangerous substances (excrements) out of the self and into the mother. Together with these harmful excrements, expelled in hatred, split off parts of the ego are also projected on to the mother or, as I would rather call it, into the mother. These excrements and bad parts of the self are meant not only to injure the object but also to control it and take possession of it. In so far as the mother comes to contain the bad parts of the self, she is not felt to be a separate individual but is felt to be the bad self.

Much of the hatred against parts of the self is now directed towards the mother. This leads to a particular kind of identification which establishes the prototype of an aggressive object relation. Also, since the projection derives from the infant's impulse to harm or to control the mother, <sup>6</sup> he feels her to be a persecutor. In psychotic disorders this identification of an object with the hated parts of the self contributes to the intensity of the hatred directed against other people. So far as the ego is concerned, excessive splitting off of parts of itself and expelling these into the outer world considerably weaken it. For the aggressive component of feelings and of the personality is intimately bound up in the mind with power, potency, strength, knowledge and many other desired qualities.

It is, however, not only the bad parts of the self which are expelled and projected, but also good parts of the self. Excrements then have the significance of gifts; and parts of the ego which, together with excrements, are expelled and projected into the other person represent the good, i.e. the loving parts of the self. The identification based on this type of projection again vitally influences object relations. The projection of good feelings and good parts of the self into the mother is essential for the infant's ability to develop good object relations and to integrate his ego. However, if this projective process is carried out excessively, good parts of the personality are felt to be lost to the self, and the mother becomes the ego ideal; this process, too, results in weakening

<sup>&</sup>lt;sup>5</sup> The description of such primitive processes suffers from a great handicap, for these phantasies arise at a time when the infant has not yet begun to think in words. In this paper, for instance, I am using the expression 'to project *into* another person' because this seems to me the only way of conveying the unconscious process I am trying to describe.

<sup>&</sup>lt;sup>6</sup> Miss Gwen Evans, in a short unpublished communication (read to the Psycho-Analytical Society in January, 1946) gave some instances of patients in whom the following phenomena were marked: lack of sense of reality, a feeling of being divided and parts of the personality having entered the mother's body in order to rob and control her; as a consequence the mother and other people similarly attacked came to represent the patient. Miss Evans related these processes to a very primitive stage of development.

<sup>&</sup>lt;sup>7</sup> Clifford Scott in an unpublished paper, read to this Society a few years ago, described three inter-connected features which he came upon in a schizophrenic patient: a strong disturbance of her sense of reality, her feeling that the world round her was a cemetery, and the mechanism of putting all good parts of herself into another person—Greta Garbo—who came to stand for her self.

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and impoverishing the ego. Very soon such processes extend to other people, <sup>7</sup> and the result may be an extreme dependence on these external representatives of the good parts of the self. Another consequence is a fear that the capacity to love has been lost because the loved object is felt to be loved predominantly as a representative of the self.

The processes of splitting off parts of the self and projecting them into objects are thus of vital importance for normal development as well as for abnormal object relations.

The effect of introjection on object relations is equally important. The introjection of the good object, first of all mother's breast is a precondition for normal development. I have already described how the internal good breast comes to form a focal point in the ego and makes for cohesiveness of the ego. One characteristic feature of the earliest relation to the good object—internal and external—is the tendency to idealize it. In states of frustration or increased anxiety, the infant is driven to take flight to his internal idealized object as a means of escaping from persecutors. From this mechanism various serious disturbances may result: when persecutory fear is too strong, the flight to the idealized object becomes excessive, and this severely hampers ego-development and disturbs object relations. As a result the ego may be felt to be entirely subservient to and dependent on the internal object—only a shell for it. With an unassimilated idealized object there goes a feeling that the ego has no life and no value of its own. I would suggest that the condition of flight to the unassimilated idealized object necessitates further splitting processes within the ego. For parts of the ego attempt to unite with the ideal object, while other parts strive to deal with the internal persecutors.

The various ways of splitting the ego and internal objects result in the feeling that the ego is in bits. This feeling amounts to a state of disintegration. In normal development, the states of disintegration which the infant experiences are transitory. Among other factors, gratification by the external good object gagain and again helps to break through these schizoid states. The infant's capacity to overcome temporary schizoid states is in keeping with the strong elasticity and resilience of the infantile mind. If states of splitting and therefore of disintegration, which the ego is unable to overcome, occur too frequently and go on for too long, then in my view they must be regarded as a sign of schizophrenic illness in the infant, and some indications of such illness may already be seen in the first few months of life. In adult patients, states of depersonalization and of schizophrenic dissociation seem to be a regression to these infantile states of disintegration.

In my experience, excessive persecutory fears and schizoid mechanisms in early infancy may have a detrimental effect on intellectual development in its initial stages. Certain forms of mental deficiency would therefore have to be regarded as belonging to the group of schizophrenias. Accordingly, mental deficiency in children at any age should be examined in the light of a possible schizophrenic illness in early infancy.

I have so far described some effects of excessive introjection and projection on object relations. I am not attempting to investigate here in any detail the various factors which in some cases make for a predominance of introjective and in other cases for a predominance of projective processes. As regards normal development, it may be said that the course of ego development and object relations depends on the degree to which an optimal balance between introjection and projection in the early stages of development can be achieved. This in turn has a bearing on the integration of the ego and the assimilation of internal objects. Even if the balance is disturbed and one or the other of these processes is excessive, there is some interaction between introjection and projection. For instance, the projection of a predominantly hostile inner world which is ruled by persecutory fears leads to the introjection—a taking back—of a hostile external world. *Vice versa*, the introjection of a distorted and hostile external world reinforces the projection of a hostile inner world.

Another aspect of projective processes, as we have seen, implies the forceful entry into the object and control of the object by parts of the self. As a consequence, introjection may then be felt as a forceful entry from the outside into the inside, in retribution for violent projection. This may lead to the fear that not only the body but also the mind is controlled by other people in a hostile way. As a result there may be a severe disturbance in introjecting good objects—a disturbance which would impede all ego-functions as well as sexual development and may lead to an

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<sup>&</sup>lt;sup>8</sup> Paula Heimann (1942) described a condition in which the internal objects act as foreign bodies embedded in the self. Whilst this is more obvious with regard to the bad objects, it is true even for the good ones, if the ego is compulsively subordinated to their preservation. When the ego serves its good internal objects excessively, they are felt as a source of danger and come close to exerting a persecuting influence. Paula Heimann introduced the concept of the assimilation of the internal objects and applied it specifically to sublimation. As regards ego-development, she pointed out that such assimilation is essential for the successful exercise of ego-functions and for the achievement of independence.

<sup>&</sup>lt;sup>9</sup> Looked at in this light, the mother's love and understanding of the infant can be seen as the infant's greatest standby in overcoming states of disintegration and anxieties of a psychotic nature.

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excessive withdrawal to the inner world. This withdrawal is, however, not only caused by the fear of introjecting a dangerous external world but also by the fear of internal persecutors and an ensuing flight to the idealized internal object.

I have referred to the weakening and impoverishment of the ego resulting from excessive splitting and projective identification. This weakened ego, however, becomes also incapable of assimilating its internal objects, and this leads to the feeling that it is ruled by them. Again, such a weakened ego feels incapable of taking back into itself the parts which it projected into the external world. These various disturbances in the interplay between projection and introjection, which imply excessive splitting of the ego, have a detrimental effect on the relation to the inner and outer world and seem to be at the root of some forms of schizophrenia.

## SCHIZOID OBJECT RELATIONS

To summarize now some of the disturbed object relations which are found in schizoid personalities: the violent splitting of the self and excessive projection have the effect that the person towards whom this process is directed is felt as a persecutor. Since the destructive and hated part of the self which is split off and projected is felt as a danger to the loved object and therefore gives rise to guilt, this process of projection in some ways also implies a deflection of guilt from the self on to the other person. Guilt has, however, not been done away with, and the deflected guilt is felt as an unconscious responsibility for the people who have become representatives of the aggressive part of the self.

Another typical feature of schizoid object relations is their narcissistic nature which derives from the infantile introjective and projective processes. For, as I suggested earlier, when the ego ideal is projected into another person, this object becomes predominantly loved and admired because it contains the good parts of the self. Similarly, the relation to other persons on the basis of projecting bad parts of the self into them is of a narcissistic nature because in this case as well the object strongly represents one part of the self. Both these types of a narcissistic relation to an object often show strong obsessional features. The impulse to control other people is, as we know, an essential element in obsessional neurosis. The need to control others can to some extent be explained by a deflected drive to control parts of the self. When these parts have been projected excessively into another person, they can only be controlled by controlling the other person. One root of obsessional mechanisms could thus be found in the particular identification which results from infantile projective processes. This connection may also throw some light on the obsessional element which so often enters into the tendency for reparation. For it is not only an object about whom guilt is experienced but also parts of the self which the subject is driven to repair or restore.

All these factors may lead to a compulsive tie to certain objects or—another outcome—to a shrinking from people in order to prevent both a destructive intrusion into them and the danger of retaliation by them. The fear of such dangers may show itself in various negative attitudes in object relations. For instance, one of my patients told me that people who are too much influenced by him seem to become too much like himself and he "gets tired" of seeing so much of himself.

Another characteristic of schizoid object relations is a marked artificiality and lack of spontaneity. Side by side with this goes a severe disturbance of the feeling of the self or, as I would put it, of the relation to the self. This relation, too, appears to be artificial. In other words, psychic reality and the relation to external reality are equally disturbed.

The projection of split-off parts of the self into another person essentially influences object relations, emotional life and the personality as a whole. To illustrate this contention I am going to select as an instance a more or less universal phenomenon: the feeling of loneliness and fear of parting. We know that one source of the depressive feelings accompanying parting from people can be found in the fear of the destruction of the object by the aggressive impulses directed against it. But it is more specifically the splitting and projective processes which underlie this fear. If aggressive elements in relation to the object are predominant and strongly stirred by the frustration of parting, the individual feels that the split-off components of his self, projected into the object, control this object in an aggressive and destructive way. At the same time the internal object is felt to be in the same danger of destruction as the external object in whom one part of the self is felt to be left. The result is an excessive weakening of the ego, a feeling that there is nothing to sustain it, and a corresponding dependence on people. While this description applies to neurotic individuals, I think that in minor degrees these processes are a general phenomenon.

One need hardly elaborate on the fact that some other features of schizoid object relations, which I described earlier, can also be found in minor degrees and in a less striking form in normal people—for instance shyness, lack of spontaneity or, on the other hand, a particularly intense interest in people.

In similar ways normal disturbances in thought processes can be related to the developmental schizoid position. For all of us are liable at times to a momentary impairment of logical thinking which amounts to thoughts being cut off from one another and situations being split off from one another; in fact, the ego is temporarily split.

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### THE DEPRESSIVE POSITION IN RELATION TO THE SCHIZOID POSITION

I now wish to consider further steps in the infant's development. So far I have described the anxieties, mechanisms and defences which are characteristic for the first few months of life. With the introjection of the complete object in about the second quarter of the first year marked steps in integration are made. This implies important changes in the relation to objects. The loved and hated aspects of the mother are no longer felt to be so widely separated, and the result is an increased fear of loss, a strong feeling of guilt and states akin to mourning, because the aggressive impulses are felt to be directed against the loved object. The depressive position has come to the fore. The very experience of depressive feelings in turn has the effect of further integrating the ego, because it makes for an increased understanding of psychic reality and better perception of the external world, as well as for a greater synthesis between inner and external situations.

The drive for reparation, which comes to the fore at this stage, can be regarded as a consequence of a greater insight into psychic reality and of growing synthesis, for it shows a more realistic response to the feelings of grief, guilt and fear of loss resulting from the aggression against the loved object. Since the drive to repair or protect the injured object paves the way for more satisfactory object relations and sublimations, it in turn increases synthesis and contributes to the integration of the ego.

During the second half of the first year the infant makes the fundamental steps towards working through the depressive position. However, schizoid mechanisms still remain in force, though in a modified form and to a lesser degree, and early anxiety situations are again and again experienced in the process of modification. The working through of the persecutory and depressive positions extends over the first few years of childhood and plays an essential part in the infantile neurosis. In the course of this process, anxieties lose in strength, objects become both less idealized and less terrifying, and the ego becomes more unified. All this is interdependent with the growing perception of reality and adaptation to it.

If, however, development during the schizoid phase has not proceeded normally and the infant cannot—for internal or external reasons—cope with the impact of depressive anxieties, a vicious circle arises. For if persecutory fear, and correspondingly schizoid mechanisms, are too strong, the ego is not capable of working through the depressive position. This in turn forces the ego to regress to the schizoid position and reinforces the earlier persecutory fears and schizoid phenomena. Thus the basis is established for various forms of schizophrenia in later life; for when such a regression occurs, not only are the fixation points in the schizoid position reinforced, but there is a danger of greater states of disintegration setting in. Another outcome may be the strengthening of depressive features.

External experiences are, of course, of great importance in these developments. For instance, in the case of a patient who showed depressive and schizoid features, the analysis brought up with great vividness the early experiences in babyhood, even to the extent that in some hours physical sensations in the throat or digestive organs occurred. The patient had been suddenly weaned at four months of age because his mother fell ill. In addition, he did not see his mother for four weeks. When she returned, she found the child greatly changed. He had formerly been lively, eager for his food, interested in his surroundings. Now he seemed completely apathetic. He had accepted the substitute food fairly easily and in fact never refused food. But he did not thrive on it any more, lost weight and had a good deal of digestive trouble. It was only at the end of the first year, when other food was introduced, that he made again good physical progress.

Much light was thrown in the analysis on the influence these experiences had on his whole development. His outlook and attitudes in adult life were based on the patterns established in this early stage. For instance, we found again and again a tendency to be influenced by other people in an unselective way—in fact to take in greedily whatever was offered—together with great distrust during the process of introjection. Anxieties from various sources, constantly disturbed the processes of introjection and contributed to an increase of the greed which had been strongly repressed in infancy.

Taking the material of this analysis as a whole, I came to the conclusion that at the time when the sudden loss of the breast and of the mother occurred, the patient had already to some extent a relation to a complete good object. He had no doubt by then entered the depressive position but could not work through it successfully and the schizoid position became regressively reinforced. This expressed itself in the 'apathy' which followed a period when the child had already shown a lively interest in his surroundings. The fact that he had reached the depressive position and had introjected a complete object showed in many ways in his personality. He had actually a strong capacity for love and a great longing for a good and complete object. A characteristic feature of his personality was the desire to love people and trust them, unconsciously to regain and build up again the good and complete breast which he had once possessed and lost.

# CONNECTION BETWEEN SCHIZOID AND MANIC-DEPRESSIVE PHENOMENA

Some fluctuations between the schizoid and the depressive position always occur and are part of

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normal development. No clear division between the two stages of development can therefore be drawn, because modification is a gradual process and the phenomena of the two positions remain for some time to some extent intermingled and interacting. In abnormal development this interaction influences, I think, the clinical picture both of some forms of schizophrenia and of manic-depressive disorders.

To illustrate this connection I shall briefly refer to some case material. I have no intention to give here a case history and am therefore only selecting some pieces of material to illustrate my point. The patient I have in mind was a pronounced manic-depressive case (diagnosed as such by more than one psychiatrist) with all the characteristics of this disorder: there was the alternation between depressive and manic states, strong suicidal tendencies leading repeatedly to suicidal attempts, and various other characteristic manic and depressive features. In the course of her analysis a stage was reached during which a noticeable improvement was achieved: the cycle became less marked but there were fundamental changes in her personality and her object relations. Productivity on various lines developed, as well as actual feelings of happiness (not of the manic type). Then, partly owing to external circumstances, another phase set in. During this last phase, which continued for several months, the patient co-operated in the analysis in a particular way. She came regularly to the analytic sessions, associated fairly freely, reported dreams and provided material for the analysis. There was, however, no emotional response to my interpretations and a good deal of contempt of them. There was very seldom any conscious confirmation of what I suggested. Yet the material by which she responded to the interpretations reflected their unconscious effect. The powerful resistance shown at this stage seemed to come from one part of the personality only, while—at the same time—another part responded to the analytic work. It was not only that parts of her personality did not co-operate with me; they did not seem to co-operate with each other, and the analysis was unable at the time to help the patient to achieve synthesis. During this stage she decided to bring the analysis to an end. To this decision external circumstances strongly contributed, and she fixed a date for the end of her analysis, in spite of my warning of the danger of a relapse.

On that particular date she reported the following dream: there was a blind man who was very worried about being blind; but he seemed to comfort himself by touching the patient's dress and finding out how it was fastened. The dress in the dream reminded her of one of her frocks which was buttoned high up to the throat. The patient gave two further associations to this dream. She said, with some resistance, that the blind man was herself; and when referring to the dress fastened up to the throat, she remarked that she had again gone into her 'hide'. I suggested to the patient that she unconsciously expressed in the dream that she was blind to the fact of her own illness, and that her decisions with regard to the analysis as well as to various circumstances in her life were not in accordance with her unconscious knowledge. This was also shown by her admitting that she had gone into her 'hide', meaning by it that she was shutting herself off, an attitude well known to her from previous stages in her illness. Thus the unconscious insight, and even some co-operation on the conscious level (recognition that *she* was the blind man and that she had gone into her 'hide'), derived from isolated parts of her personality only. Actually, the interpretation of this dream did not produce any effect and did not alter the patient's decision to bring the analysis to an end in this particular hour. 10

At the stage preceding the breaking off of the analysis, some light was thrown on certain difficulties encountered in the course of this analysis and, as I may add, in others as well. It was the mixture of schizoid and manic-depressive features which determined the nature of her illness. For at times throughout her analysis—even at the early stage when depressive and manic states were at their height—depressive and schizoid mechanisms sometimes appeared simultaneously. There were, for instance, hours when the patient was obviously deeply depressed, full of self-reproaches and feelings of unworthiness; tears were running down her cheeks and her gestures expressed despair; and yet she said, when I interpreted these emotions, that she did not feel them at all. Whereupon she reproached herself for having no feelings at all, for being completely empty. In such hours there was also a flight of ideas, the thoughts seemed to be broken up, and their expression was disjointed.

Following the interpretation of the unconscious reasons underlying such states, there were sometimes hours in which the emotions and depressive anxieties came out fully, and at such times thoughts and speech were much more coherent.

This close connection between depressive and schizoid phenomena appeared, though in different forms, throughout her analysis but became very pronounced during the last stage preceding the breaking off which I have described.

I have already referred to the developmental connection between the schizoid and depressive positions. The question now arises whether this developmental connection is the basis for the mixture of these features in manic-depressive disorders and, as I would suggest, in schizophrenic

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<sup>&</sup>lt;sup>10</sup> I may mention that the analysis was resumed after a break, when she felt again in danger of relapsing into a depression state.

disorders as well. If this tentative hypothesis could be proved, the conclusion would be that the groups of schizophrenic and manic-depressive disorders are more closely connected developmentally with one another than has been assumed. This would also account for the cases in which, I believe, the differential diagnosis between melancholia and schizophrenia is exceedingly difficult. I should be grateful if further light could be thrown on my hypothesis by colleagues who have had ample material for psychiatric observation.

# SOME SCHIZOID DEFENCES

It is generally agreed that schizoid patients are more difficult to analyse than manic depressive types. Their withdrawn, unemotional attitude, the narcissistic elements in their object relations (to which I referred earlier), a kind of detached hostility which pervades the whole relation to the analyst create a very difficult type of resistance. I believe that it is largely the splitting processes which account for the patient's failure of contact with the analyst and for his lack of response to the analyst's interpretations. The patient himself feels estranged and far away, and this feeling corresponds to the analyst's impression that considerable parts of the patient's personality and of his emotions are not available. Patients with schizoid features may say: 'I hear what you are saying. You may be right, but it has no meaning for me.' Or again they say they feel they are not there. The expression 'no meaning' does in such cases not imply an active rejection of the interpretation but suggests that parts of the personality and of the emotions are split off. These patients can, therefore, not deal with the interpretation; they can neither accept it nor reject it.

I shall illustrate the processes underlying such states by a piece of material taken from the analysis of a man patient. The hour I have in mind started with the patient's telling me that he felt anxiety and did not know why. He then made comparisons with people more successful and fortunate than himself. These remarks also had a reference to me. Very strong feelings of frustration, envy and grievance came to the fore. When I interpreted—to give here again only the gist of my interpretations—that these feelings were directed against the analyst and that he wanted to destroy me, his mood changed abruptly. The tone of his voice became flat, he spoke in a slow, expressionless way, and he said that he felt detached from the whole situation. He added that my interpretation seemed correct, but that it did not matter. In fact, he no longer had any wishes, and nothing was worth bothering about.

My next interpretations centred on the causes for this change of mood. I suggested that at the moment of my interpretation the danger of destroying me had become very real to him and the immediate consequence was the fear of losing me. Instead of feeling guilt and depression, which at certain stages of his analysis followed such interpretations, he now attempted to deal with these dangers by a particular method of splitting. As we know, under the pressure of ambivalence, conflict and guilt, the patient often splits the figure of the analyst; then the analyst may at certain moments be loved, at other moments hated. Or the relation to the analyst may be split in such a way that he remains the good (or bad) figure while somebody else becomes the opposite figure. But this was not the kind of splitting which occurred in this particular instance. The patient split off those parts of himself, i.e. of his ego, which he felt to be dangerous and hostile towards the analyst. He turned his destructive impulses from his object towards his ego, with the result that parts of his ego temporarily went out of existence. In unconscious phantasy this amounted to annihilation of part of his personality. The particular mechanism of turning the destructive impulse against one part of his personality, and the ensuing dispersal of emotions, kept this anxiety in a latent state.

My interpretation of these processes had the effect of again altering the patient's mood. He became emotional, said he felt like crying, was depressed, but felt more integrated; then he also expressed a feeling of hunger. 11

Changes of mood, of course, do not always appear as dramatically within a session as in the first instance I have given in this section. But I have repeatedly found that advances in synthesis are brought about by interpretations of the specific causes for splitting. Such interpretations must deal in detail with the transference situation at that moment, including of course the connection with the past, and must contain a reference to the details of the anxiety situations which drive the ego to regress to schizoid mechanisms. The synthesis resulting from interpretations on these lines goes along with depression and anxieties from various sources. Gradually such waves of depression—followed by greater integration—lead to a lessening of schizoid phenomena and also to fundamental changes in object-relations.

The violent splitting off and destroying of one

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<sup>&</sup>lt;sup>11</sup> The feeling of hunger indicated that the process of introjection had been set going again under the dominance of the libido. While to my first interpretation of his fear of destroying me by his aggression he had responded at once with the violent splitting off and annihilation of parts of his personality, he now experienced more fully the emotions of grief, guilt and fear of loss, as well as some relief of these depressive anxieties. The relief of anxiety resulted in the analyst again coming to stand for a good object which he could trust. Therefore the desire to introject me as a good object could come to the fore. If he could build up again the good breast inside himself, he would strengthen and integrate his ego, would be less afraid of his destructive impulses, in fact he could then preserve himself and the analyst.

part of the personality under the pressure of anxiety and guilt is in my experience an important schizoid mechanism. I should like to quote another short instance: a woman patient dreamed that she had to deal with a wicked girl child who was determined to murder somebody. The patient tried to influence or control the child and to extort a confession from her which would have been to the child's benefit; but she was unsuccessful. I also entered into the dream and the patient felt that I might help her in dealing with the child. Then the patient strung up the child on a tree in order to frighten her and also prevent her from doing harm. When the patient was about to pull the rope and kill the child, she woke. During this part of the dream the analyst was also present but again remained inactive.

I shall give here only the essence of the conclusions I arrived at from the analysis of this dream. The patient's personality was split in the dream into two parts: the wicked and uncontrollable child on the one hand, and on the other hand the person who tried to influence and control her. The child, of course, stood also for various figures in the past, but in this context she mainly represented one part of the patient's self. Another conclusion was that the analyst was the person whom the child was going to murder; and my rôle in the dream was partly to prevent this murder from taking place. Killing the child—to which the patient had to resort—represented the annihilation of one part of her personality.

The question arises how the schizoid mechanism of annihilating part of the self connects with repression which, as we know, is directed against dangerous impulses. This, however, is a problem with which I cannot attempt to deal here.

# LATENT ANXIETY IN SCHIZOID PATIENTS

I have already referred to the lack of emotion which makes schizoid patients unresponsive. This goes together with an absence of anxiety. An important support for the analytic work is therefore lacking. For with other types of patients who have strong manifest and latent anxiety, the relief of anxiety derived from analytic interpretation becomes an experience which furthers their capacity to co-operate in the analysis.

This lack of anxiety in schizoid patients is only apparent. Though the schizoid mechanisms imply a dispersal of emotions including anxiety, these dispersed elements persist in the patient's mind. Such patients have a certain form of latent anxiety; it is kept latent by the particular method of dispersal. The feeling of being disintegrated, of being unable to experience emotions, of losing one's objects, is in fact the equivalent of anxiety. This becomes clearer when advance in synthesis has been made. The great relief which a patient then experiences derives from a feeling that his inner and outer world have come not only more together but back to life again. At such moments it appears in retrospect that when emotions were lacking, relations were vague and uncertain and parts of the personality were felt to be lost, everything was felt to be dead. All this is the equivalent of anxiety of a very serious nature. This anxiety, kept latent by dispersal, is to some extent experienced all along, but its form differs from the latent anxiety which we can recognize in other types of cases.

Interpretations which tend towards synthesizing the split in the ego, including the dispersal of emotions, make it possible for the anxiety gradually to be experienced as such, though for long stretches we might in fact only be able to bring the ideational contents of the anxiety together but not the affect of anxiety.

I have also found that interpretations of schizoid states make particular demands on our capacity to put the interpretations in an intellectually clear form in which the links between the conscious, pre-conscious and unconscious are established. This is, of course, always one of our aims, but it is of special importance at times when the patient's emotions are not available and we only seem to address ourselves to his intellect, however much broken up.

It is possible that the few hints I have given may to some extent apply as well to the technique of analysing schizophrenic patients.

### **APPENDIX**

Freud's analysis of the Schreber case (Freud, 1911) contains a wealth of material which is very relevant to my topic but from which I shall here draw only a few conclusions.

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Schreber described vividly the splitting of the soul of his physician Flechsig (his loved and persecuting figure). The 'Flechsig soul' at one time introduced the system of 'soul divisions' splitting into as many as forty to sixty subdivisions. These souls having multiplied till they became a 'nuisance', God made a raid on them and as a result the Flechsig soul survived in 'only one or two shapes'. Another point which Schreber mentions is that the divisions of the Flechsig soul slowly lost both their intelligence and their power.

One of the conclusions Freud arrived at in his analysis of this case was that the persecutor was split into God and Flechsig, besides God and Flechsig also representing father and brother. In discussing the various forms of Schreber's delusion of the destruction of the world, Freud states: 'In any case the end of the world was the consequence of the conflict which had broken out between him' (Schreber) 'and Flechsig, or, according to the ætiology adopted in the second phase of

his delusion, of the indissoluble bond which had been formed between him and God ... (Freud, 1911, pp. 455–456).

I would suggest, in keeping with the hypotheses put forward in my present paper, that the division of the Flechsig soul into many souls was not only a splitting of the object but also a projection of Schreber's feeling that his ego was split. I shall here only mention the connection of such splitting processes with processes of introjection. The conclusion suggests itself that God and Flechsig also represented parts of Schreber's self. The conflict between Schreber and Flechsig, to which Freud attributed a vital rôle in the World destruction delusion, found expression in the raid by God on the Flechsig souls. In my view this raid represents the annihilation by one part of the self of the other parts—which, as I contend, is a schizoid mechanism. The anxieties and phantasies about inner destruction and ego disintegration bound up with this mechanism are projected on to the external world and underlie the delusions of its destruction.

Regarding the processes which are at the bottom of the paranoic world catastrophe, Freud arrived at the following conclusions: 'The patient has withdrawn from the persons in his environment and from the external world generally the libidinal cathexis which he has hitherto directed on to them. Thus all things have become indifferent and irrelevant to him, and have to be explained by means of a secondary rationalization as being "miracled up, cursory contraptions". The end of the world is the projection of this internal catastrophe; for his subjective world has come to an end since he has withdrawn his love from it' (Freud, 1911, pp. 456–457). This explanation concerns specifically the disturbance in object-libido and the ensuing breakdown in relation to people and to the external world. But a little further on (pp. 461–462) Freud considered another aspect of these disturbances. He said: 'We can no more dismiss the possibility that disturbances of the libido may react upon the egoistic cathexes than we can overlook the converse possibility — namely, that a secondary or induced disturbance of the libidinal processes may result from abnormal changes in the ego. Indeed, it is probable that processes of this kind constitute the distinctive characteristic of psychoses' (my italics). It is particularly the possibility expressed in the last two sentences which provides the link between Freud's explanation of the world catastrophe and my hypothesis. 'Abnormal changes in the ego' derive, as I have suggested in this paper, from excessive splitting processes in early infancy. These processes are inextricably linked with instinctual development, and with the anxieties to which instinctual desires give rise. In the light of Freud's later theory of the Life and Death Instincts, which replaced the concept of the egoistic and sexual instincts, disturbances in the distribution of the libido presuppose a defusion between the destructive impulse and the libido. The mechanism of one part of the ego annihilating other parts which, I suggest, underlies the world catastrophe phantasy (the raid by God on the Flechsig souls) implies a preponderance of the destructive impulse over the libido. Any disturbance in the distribution of the narcissistic libido is in turn bound up with the relation to introjected objects which (according to my work) from the beginning come to form part of the ego. The interaction between narcissistic libido and object libido corresponds thus to the interaction between the relation to introjected and external objects. If the ego and the internalized objects are felt by the infant to be in bits, an internal catastrophe is experienced which both extends to the external world and is projected on to it. Such anxiety states relating to internal catastrophe arise, according to the hypothesis put forward in my present paper, during the period of the infantile paranoid (or schizoid) position and form the basis for later schizophrenia. In Freud's view the dispositional fixation to Dementia Præcox is found in a very early stage of development. Referring to Dementia Præcox, which Freud distinguished from Paranoia, he said: 'The dispositional point of fixation must therefore be situated further back than in paranoia, and must lie somewhere at the beginning of the course of development from auto-erotism to object-love (Freud, 1911, p. 464).

I wish to draw one more conclusion from Freud's analysis of the Schreber case. I suggest that the raid which ended in the Flechsig souls being reduced to one or two, was part of the attempt towards recovery. For the raid was to undo, one may say heal, the split in the ego by annihilating the split-off parts of the ego. As a result only one or two of the souls were left which, as we may

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assume, were meant to regain their intelligence and their power. This attempt towards recovery, however, was effected by very destructive means used by the ego against itself and its introjected objects.

Freud's approach to the problems of schizophrenia and paranoia has proved of fundamental importance. His Schreber paper (and here we also have to remember Abraham's paper quoted by Freud (Abraham, K., 1928) opened up the possibility for the understanding of psychosis and the processes underlying it.

# **SUMMARY**

I propose to summarize some of the conclusions presented in this paper. One of my main points was the suggestion that in the first few months of life anxiety is predominantly experienced as fear of persecution and that this contributes to certain mechanisms and defences which characterize the paranoid and schizoid positions. Outstanding among these defences is the mechanism of splitting internal and external objects, emotions and the ego. These mechanisms and defences are part of normal development and at the same time form the basis for later schizophrenic illness. I described the processes underlying identification by projection as a combination of splitting off parts of the self and projecting them on to another person, and

some of the effects this identification has on normal and schizoid object relations. The onset of the depressive position is the juncture at which by regression schizoid mechanisms may be reinforced. I also suggested a close connection between the manic-depressive and schizoid disorders, based on the interaction between the infantile schizoid and depressive positions.

### REFERENCES

ABRAHAM, K. 1928 (Trans. 1942.) 'The Psycho-sexual Differences between Hysteria and Dementia Prcox' Selected Papers on Psycho-Analysis

FAIRBAIRN, W. R. D. 1941 'A Revised Psychopathology' Int. J. Psychoanal. 22:271 →

FAIRBAIRN, W. R. D. 1944 'Endopsychic Structure considered in terms of Object Relationships' *Int. J. Psychoanal.* 25:70

FAIRBAIRN, W. R. D. 1946 'Object Relationships and Dynamic Structure' Int. J. Psychoanal. 27:30 [→]

FREUD, S. 1911 (Trans. 1925.) 'Psycho-Analytic Notes upon an Autobiographical Account of a Case of Paranoia' Collected Papers III

HEIMANN, P. 1942 'A Contribution to the Problem of Sublimation and its Relation to the Processes of Internalization' *Int. J. Psychoanal.* 23 [→]

KLEIN, M. 1932 (Trans. 1932.) The Psycho-Analysis of Children (London, Hogarth Press.) [→]

KLEIN, M. 1935 'A Contribution to the Psychogenesis of Manic-Depressive States' *Int. J. Psychoanal.* 16:45 [→]

WINNICOTT, D. W 1945 'Primitive Emotional Development' Int. J. Psychoanal. 26:137 →

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