PSYCHOTHERAPY AND THE PHYSICAL METHODS OF TREATMENT IN PSYCHIATRY*

By

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It is only proper that I should begin this paper with a disclaimer. I am not a psychotherapist, nor am I one who has devoted much of his time to the physical methods of treatment. My only qualification to carry this burden at all is that I believe I am somewhat in a neutral position and have not been fired alone by either set of enthusiasms—neither those which activate the physical treatment experts, nor those which sustain the psychopathologists. Necessarily therefore what I have to say will be from a personal viewpoint, although of course not a detached one and I will apologize once for this and not again. The subject of this talk is obviously an important one and must be the concern of psychiatrists of all persuasions. Those who are psychotherapists cannot ignore the fact that the main mental disorders which constitute the serious core of psychiatric disability in the community are treated first and foremost by physical methods, insulin coma, E.C.T. and surgery, while those who are non-analytical psychiatrists cannot ignore the fact that the less serious but enormously more prevalent conditions are treated in the main by psychological methods. The question might be asked, are there then two types of psychiatric disorder, the one only treatable by a physical method, the other by a psychological method? But this is a superficial view; with the greater sophistication of physical methods more and more patients who formerly were treated by psychotherapy are now subjected to some physical treatment, and conversely—and this is particularly evident from the American literature—more and more patients, particularly schizophrenics, formerly treated by insulin or surgery are now being subjected to psychoanalysis. Each side is therefore invading the territory of the other, but there is no common language or ground for discussion between them. Now of course there are many different forms of physical treatment, just as there are many different types of psychotherapy. Let me take the physical treatments first. We can I think divide them roughly into two classes. There are those which by their universal use for a special type of mental state or special group of symptoms have come to be regarded, rightly or wrongly, as almost a *radical* treatment for such conditions. For this group no psychopathological preconception regarding the patient, his problems, his methods of adaptation and defence are necessary. All that is needed is a clear statement of his symptomatology, its duration and course to enable the physician to determine the type of treatment. In this group therefore we can place insulin comas, E.C.T., and cerebral surgery of the leucotomy type. It is only necessary to demonstrate schizophrenic thought disorder and primary delusions of recent onset to arrive at the view that insulin treatment is advisable; on the other hand depressive affect, depressive sleep disorder and loss of weight, continuing beyond the

* A Maudsley Bequest Lecture delivered under the auspices of the Royal Medico-Psychological Association, on 3 November, 1953, in London.

https://doi.org/10.1192/bjp.100.419.360 Published online by Cambridge University Press

reasonable period following a stress situation or the absence of a stress situation particularly in the involutional period of life will lead many to recommend E.C.T. without more ado. For chronic obsessional tension, rumination or distressing psychotic ideas interfering with adaptation, leucotomy or some modified form of surgery come to mind.

The second group of treatments under the general heading, physical methods, are of quite a different nature. In this class we can place the use of pentothal, sodium amytal, ether, CO_2, acetylcholine and methedrine, given to activate, sustain or make possible a cathartic or abreactive therapy. This group is obviously quite different from the first, since the physical agent used is given in the service of a strictly psychotherapeutic situation. These drugs are only used within a framework of psychopathological hypothesis regarding the patient's problem. I point this out since there has been a tendency in the literature to suggest that E.C.T. and insulin owe their method of action to a similar process—that is a cathartic process. Even if this were true, it is necessary to point out that the ways in which the two types of treatment are given, and the attitudes of psychiatrists to the two types are essentially different. The one is based upon a psychopathological hypothesis and can only be given when a great deal is known about the patient, while in the other case, it is very frequently administered without any such knowledge, and there is no hypothesis.

Psychotherapeutic methods can of course also be classified. Leaving aside suggestion and persuasion which are now used chiefly by our colleagues in other branches of medicine and educative psychotherapy which has a place everywhere, we can divide psychotherapies into those which are strictly cathartic or abreactive and those which are analytic in their aims. It is to be recalled that Breuer and Freud first used the cathartic method, which grew out of their experience of hypnosis. Catharsis became in fact for a time in those early days, the object of their psychotherapeutic technique, and it was only when Freud distrusted the results of hypnosis that he devised the method of free association, and then later recognized the significance of transference as essential to the procedure. It is important perhaps to emphasize this: that the transference—counter-transference phenomena are in fact important in both the cathartic and analytic methods, but more particularly in the latter. Now it is obvious that the second group of physical methods of treatment which have been found to be so useful owe their action entirely to their capacity to facilitate the cathartic process. In fact it has been stated, by Sargant and Shorvon in particular, that the content of what is abreacted is not perhaps so significant as the degree and quality of the emotions aroused and their discharge in motor and visceral behaviour. Despite this there are many who claim that catharsis can always be achieved more readily and its results are best when the therapist has an understanding of the patient's psychopathology. Rapport with the patient, that is the development of a transference situation is an absolute and necessary prerequisite for the cathartic process. During the development of this situation the psychiatrist becomes aware of the patient's need to discharge his affects and tensions and also of the patient's capacity to do so—that is his capacity to externalize his dammed up emotion. This, perhaps, as much as any symptom-constellation determines the psychiatrist's choice of a cathartic method of treatment. It is here that the difference lies between the type of patient for whom insulin, E.C.T. or surgery is prescribed. The first type of patient has demonstrated to the psychiatrist, or the psychiatrist has divined by empathy, that catharsis is possible and will be helpful, while the second type of patient by reason of his failure to develop a transference appears to the psychiatrist to be

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shut off from such an approach. The danger lies in making the division not upon the failure to establish transference, but as I have said upon the presence of a syndrome or grouping of symptoms, because if this is accepted the primary aim of all treatment, which must be psychotherapeutic, may be neglected and the patient not given the opportunity or time to establish a transference relationship. Unfortunately if the decision to give E.C.T., insulin, etc., is made upon symptoms only, the influence which such treatments have upon the psychotherapeutic process is likely to be ignored altogether. When this happens the psychiatrist does a sudden shift in his thinking and is preoccupied solely with the physiological effects of his technique. It is therefore of some interest to consider how non-analytical psychiatrists and psychoanalysts think about these treatments and how they work.

Nearly all psychoanalysts take a strictly psychological view, despite the fact that psychoanalysis is a theory founded on biology. On the other hand nearly all psychiatrists take a physiological view despite the fact that for all the other treatments they take a psychological view, and for one and the same patient will attempt to treat him by a cathartic psychological method and chemical activator for a period of time and then give up and give him E.C.T. When this happens the psychiatrist is inclined to say that the patient was not suffering from a "reactive" depression after all but an "endogenous" one.

A visitor from another planet would I think be very perplexed by a perusal of the leading journals of the world which are concerned with psychiatry. If he looked up the question of the treatment of schizophrenia, for example, he would find some journals devoted entirely to articles giving reports of results of shock treatment, insulin, psychosurgery and hormone therapy and quite different ones devoted to the analysis by psychological methods of the personality problems of such patients: he would have to search a long time to find an article which dealt with both the life situations, the personal psychopathology, the psychoanalysis and the treatment by insulin, of such patients. This sort of thing happens very seldom. Yet we know—or at least the literature tells us—that schizophrenics and manic depressives can be treated successfully by both these methods.

It is of course true that lip service is paid to psychotherapy by most of those who practise these treatments. But the type of psychotherapy utilized is mostly educative, social, occupational and is aimed at reintroducing a patient back into a life from which he has been isolated by his psychiatric illness. Such treatment bears no resemblance to the psychotherapeutic task which is the essential programme for all those patients who are treated by the abreactive, cathartic or analytic methods. It seems that once a decision to perform a leucotomy, to give E.C.T. or to give insulin is made, the patient and his illness are immediately viewed in an entirely different light. Sometimes one feels that this change of attitude for the psychiatrist comes as a personal relief.

Now this is a matter which I propose to look at a little more closely. To all those who are *sure*, reiterate sure, that what is wrong with a schizophrenic patient is an unknown hormonal defect, perhaps an imbalance of sugar versus mineral corticoids secreted by the adrenal cortex, or an as yet undiscovered hypothalamic lesion, or a defect in the O_2 metabolism of the cortical cells, and that this and this alone is what is wrong, for all such the matter is fairly simple. Psychotherapy is necessary at the educative level just as social and physical rehabilitation is necessary for a fracture patient and of course such treatment is to be given during the convalescence period. Alternatively for all those who believe that schizophrenia is due to a regression of the ego—a mechanism understandable only in psychological terms and not in principle different from

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what is generally accepted as occurring in the neuroses, a regression which leads ultimately to a break with reality; for persons of such belief the psychotherapeutic approach must inevitably always take first place and all physical treatments if given viewed either as hindrances or helps to the psychotherapeutic process. This of course is the extreme analytic position. The third viewpoint, which I suppose the majority of us either accept or deviate from in one direction or another to a certain extent, is the compromise position. The schizophrenic symptomatology, the development and progress of the illness are understandable in psychological terms only. Such an illness differs in essentials from say a carcinoma of the kidney in being an illness understandable only in terms of the life-long series of interpersonal relationships in which the patient has been engaged. But there is more to it than this. The malignant depth of the regression, the progressive inaccessibility of the patient, the ultimate break with reality, these we perhaps believe will one day be shown to be due to hormonal balance changes, to defective homeostatic mechanisms within the nervous system, to asynchronous activity between nerve-net systems, say thalamo-cortical interaction or some such. Indeed behind this again we can detect the presence of the undoubted hereditary factor, perhaps the ultimate determinant of the issue—adaptive regulation or illness for many patients. But we are tired of saying to one another that schizophrenia is not a disease, is not an entity, that the organism works as a whole anyway, that aetiology is multiple, that there is no one cause and that it is nonsense to think of aetiology in terms of either physiogenic or psychogenic. From this dark night of the psychiatrist's soul, cybernetics comes like a new creed to bring peace to the afflicted. From this new doctrine you can be either a Freudian and treat your patient with analysis or alternatively give him insulin or E.C.T., or do a leucotomy without any troubles of conscience. But cybernetics has not helped the essential dilemma, which I think is this. It would be all right, or at least the issue could be postponed, if these methods of treatment really worked or if this is unfair, if we were really satisfied with the results. Dr. Mayer Gross, whose experience is second to none, in his report to the Psychiatric Congress in Paris in 1950 reported that 57 per cent. of schizophrenics of less than a year's illness were able to leave hospital after insulin therapy whereas 34 per cent. of the control group were able to do so. These figures are very similar to those given by many other workers and most are agreed that insulin treatment reduces the time spent in hospital. There is some doubt whether the treatment prevents, facilitates or has no effect upon relapses. It is not so important that 23 per cent. of schizophrenics are definitely helped by insulin therapy but that 43 per cent. of such patients, still in their first year of illness are not. Further the significant improvement in the immediate outcome for recent cases of schizophrenia given insulin therapy diminishes with time, if follow-up studies are made. There is really very little evidence that this treatment affects the ultimate prognosis of schizophrenia. No-one has suggested that cerebral surgery does so although all are agreed upon the usefulness of these procedures in controlling and ameliorating the effect of the psychosis in some patients. The position of E.C.T. is of course better, particularly for involutional melancholia, and for all depressions the results are just about twice as good as conservative treatment, but convulsive therapy has no influence in manic depressives on the tendency to relapse. It neither lengthens nor shortens the free intervals (Mayer Gross, 1951). Certainly there is evidence that E.C.T. shortens the duration of the individual attack and has transformed the outlook for the involutional patient. I have not quoted to you large numbers of figures related to this, but have given what I believe is the sober judgment of those who have had extensive

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experience of these matters. But a brief survey of the physical treatment literature shows, I think, some dissatisfaction with the results. This is seen in what amounts to a flood of new devices and new techniques, new combinations of the different treatments and the like. For example, there are new methods of inducing a convulsion, methods causing suppression of the motor effects of the convulsion, partial convulsions, electrical stimulation of the brain without a convulsion supervening, combinations of insulin coma and convulsions, insulin with intravenous sodium amytal or pentothal, insulin with corpus luteum hormone, insulin with fever therapy and many others. But the evidence is lacking that these new techniques materially alter the prognostic situation. I would like to emphasize at this point, in case I am misunderstood, that personally I think insulin coma therapy is the treatment of choice for many cases of recent schizophrenia, that E.C.T. is always indicated where possible for the involutional melancholic, and that the results of neurosurgery as palliative can be and often are excellent. But the all-over picture of these treatments viewed either practically or theoretically should give no occasion for complacency—indeed just the opposite. However, no-one has suggested that better results can be claimed for psychoanalysis, although it is clear that successful treatment of psychotic patients by psychoanalysis, despite Freud's views to the contrary, is being carried out in different parts of the world—such treatment is however usually a modified technique from the classical method.

Before proceeding to consider the psychotherapeutic position or rather the attitude of psychotherapists to these matters I would like to restate what seem to me issues which are or may be harmful to the future development of this subject.

Firstly: The extensive development of the three major empirical techniques, insulin, E.C.T. and surgery have led to an unpsychological attitude to the aetiology of the functional psychoses and for all those conditions for which these treatments are given. No matter how much of the symptomatology either physical or psychological, can only be understood in physiological or chemical terms, the individual patient's essential problem is always a psychological one. A piece of atrophied brain, a neoplastic growth, an abnormal metabolite, an epileptic explosion of a nerve-net system—none of these *of themselves* can give rise to what we call psychosis. This is suffered by the rest of the organism or by the environment in which it lives. Further it has often been pointed out that it is naive to assume that because a treatment of a physical nature has therapeutic value, the illness from which the patient suffered was necessarily physical in nature. If this were so the Lord Chief Justice who advocates flogging for delinquency would have to agree that this condition has an organic basis.

Secondly: The evidence is, I believe, that while these physical methods of treatment are often very valuable indeed, and are the best we have at our disposal, nevertheless there is a tendency to complacency about the results. The 43 per cent. of recent schizophrenics who do not respond to insulin should be borne in mind.

Thirdly: The very success of such methods, by its immediacy on a short term view, although not perhaps justified on a long-term view, and the wealth of experimental work related to these physical therapeutic methods, have tended to isolate the functional psychoses, particularly schizophrenia and manic depression from the main body of a psychologically oriented psychiatry to which most psychiatrists are adherent. This makes for artificial, contradictory and illogical attitudes in our thinking and finally in our therapeutic practice. There are indeed now two psychiatries, each unfortunately hostile to the other—but both trying to treat the same types of patient and both reporting successes and failures.

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I will now turn to the question of the psychoanalytic attitudes to these matters. Most writers consider that the effects of the physical methods of treatment are due to the *psychological meaning* which the treatments have for the patient. For example shock treatment is thought of as a death threat to the patient, or as a punishment inflicted by the physician; leucotomy as a punishing mutilation and so on. These early views have been somewhat modified, but the affect aroused among psychoanalysts by these methods has been matched only by the hostility towards psychoanalysts among many of their colleagues of other persuasions. Dr. D. W. Winnicott in 1947 expressed himself very forcibly on these issues. He saw in E.C.T. "an escape from the acceptance of the psychology of the unconscious and from the implications of the psychological developments of the past 50 years". Leucotomy he described as the "worst honest error in the history of medical practice". He also suggested that these methods "express society's unconscious reaction to insanity" and that the good results obtained depend upon this—that "by them expression is given in an acceptable (because hidden) form to the unconscious distress society experiences in the face of mental illness". He pointed out—and here certainly many will agree with him—that "massive guilt feelings and fear and consequent hate are roused in people who are concerned with mentally ill persons . . .". To test opinion about the present attitude among psychotherapists to physical methods of treatment I circulated a letter containing 4 questions to 13 psychotherapists whom I selected as being very prominent and distinguished in their field. Ten letters went to Freudian, two to Jungian analysts, and one to an eclectic. This of course is not a statistical study—merely a kite to test the strength and direction of the prevalent mind. Eleven of my letters were answered and my correspondents impressed me by the thought, care and time they had given to my letter. I am most grateful to them. The questions were:

(1) Do you consider that the physical methods of treatment, including E.C.T., electronarcosis, insulin coma therapy and prefrontal leucotomy make psychoanalysis impossible or very difficult if these are given during the period of treatment?

(2) If these treatments have been given at some time in the past, does this fact constitute a contra-indication to treatment by psychoanalysis in the sense that they alter the prognosis for treatment?

(3) Are there theoretical reasons for considering such treatments as being harmful to ultimate psychological adaptation?

(4) Have you personal experience which would illustrate your answers to the first three questions?

While all my correspondents were at pains to point out that their experience related to these questions specifically was limited, certain clear attitudes emerged. Psychoanalytic treatment is regarded as impossible during the process of treatment by these methods, but in the case of E.C.T. if time is allowed to the patient for recovery from the memory defect psychoanalysis can perhaps be continued. On the other hand the process of E.C.T. would appear to reinforce *repression* and as a result psychotherapy thereafter would tend to remain at a superficial level. Two of my correspondents while emphasizing that the analytic process is impossible during such treatments, point out that conversely not to give psychotherapy of some sort is a grave error. This applies particularly to insulin therapy.

The majority opinion regarding the effects of such treatment on the prognosis for subsequent analysis was first, that leucotomy made it impossible—in fact constituted an absolute bar. This of course is the prevalent view of those who have written on the subject. Such patients are found to suffer from "an impaired capacity for emotional expression which precludes the capacity to face the realities of internal conflict in a manner required for psychoanalytic treat-

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ment" (Dr. R. Fairbairn). For other treatments the contraindication is less serious, although it is believed that all such treatments will affect the outcome of analysis. This might equally apply to all the failures of the physical methods. Of all the treatments E.C.T. is considered to affect the outcome of later deep psychotherapy least, and in fact analysts of the Jungian school are not averse to giving this or advising it during certain phases of a patient's illness.

It is impossible to give a summary of the answers to my fourth question which was a request for details of psychotherapists' personal experience which might support their views. It is clear however that, just as it is a familiar experience for psychiatrists to accept for treatment by one of the physical methods patients who have received periods of psychoanalysis or analytic psychotherapy, so also psychotherapists are approached by patients who have failed to respond to the physical methods of treatment. There is a two-way traffic in failure, but it is also true that psychoanalysts, particularly, tend to reject for treatment patients who have received but failed to respond to a physical method. The converse does not, I think, apply.

My third question: are there theoretical reasons for considering such treatments as being harmful to ultimate psychological adaptation? produced answers which seem to me to clarify the psychotherapists' attitude to physical methods. In general these methods are regarded as harmful because all of them tend to stabilize the patient at a low level or immature level of adaptation. Two important views emerged. One is that all these methods, insulin, E.C.T., surgery produce their effects by reason of the amount of brain damage they induce. In so far as these effects are irreversible thus far are their effects harmful. E.C.T. is perhaps least serious and could be compared, Dr. Gillespie suggests, to the effects of a sleeping draught or an alcoholic spree—a blanketing effect relieving the ego for a time from the tension produced by the pressure of internal excitations. This view that all these treatments are polite ways of damaging the brain and producing a fuddled partially amnesic and therefore comfortable state, can and should of course be challenged and I propose to return to it. The other, and I believe more important, attitude in answer to this question of mine is this. Many of my correspondents return again and again to the idea that what matters is not what is done to the patient *but how it is done* and this particularly applies to the treatment of psychotics. The whole question of the counter-transference—the hidden unconscious attitudes of the doctor towards his patient, which motivate his behaviour towards the patient and his responses to the patient's behaviour, this is the urgent preoccupation of all those psychoanalysts and Jungians who are now working on the psychotherapy of the psychoses. In connection with the physical methods, many of my correspondents refer to this issue. Dr. Winnicott regards E.C.T., for example, as a method providing a "way out" for patient and doctor from the basic anxiety and madness and the suicide moments, constituting "a blind co-operation of the doctor with the patient's suicidal urge". Dr. E. A. Bennet writes: "In my experience so much depends on how the treatment is presented to the patient and this is more important than the bare bones of the treatment itself. I believe that if E.C.T. for example is presented in a certain way it has no harmful effects. But if it is presented in a brusque manner and perhaps given rather badly, then I think the results would be less favourable." Dr. Michael Fordham writes: "I would emphasize the need for an examination of what the treatment means to the doctor. I think this important because as the result of analysing psychiatrists I conclude that physical methods you mention are often used in a defensive way by them and that the methods play upon complex patterns in the unconscious

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of which the physician is too often unaware. I take it this goes somewhere towards explaining the flagrant misuse of the physical treatments." Finally he writes: "Any objection I might have against the use of physical methods would disappear if I felt sure the motive for using them was 'all right'." Dr. Clifford Scott puts the matter from the patient's angle and from the effects on prognosis of a noxious countertransference: "The less justification a patient has for matching his own desires to produce pain, mutilation and confusion in other people's wishes (including those of his psychiatrist)—regardless of the degree to which the others who produced pain, mutilation and delirium justify their acts by the result, the more easy it would or should be to enable the patient to accept his own impulses and conflicts." Can we disregard these views, which are echoed in an increasingly large literature, as a product of the psychoanalytical philosophy, irrelevant to general therapeutic efficacy? I do not think we can. From the start of insulin therapy it was apparent that the psychological atmosphere of the unit was a factor of supreme importance in determining the results. It is not only the technical skill and self confidence of the doctor which permits him to deprive progressively lower and lower levels of his patient's brain stem safely to oxygen deprivation, but also his positive but permissive and accepting attitudes to the patient's behaviour which will influence his success. To what extent can he by understanding and empathy enter the terrifying world of unreality in the patient's ego and to what extent can he allay anxiety and draw that ego back to the reality from which it has broken away? Such abilities are perhaps an exceptional gift—not to be acquired—and the example of Dr. J. N. Rosen who claims good results with intensive interpretative psychoanalysis of schizophrenics comes to mind. Not everyone can acquire training in psychotherapy, but the question could be asked how much of this capacity is inherent, how much acquired? There can be no doubt that this ability exists. More important perhaps is the converse question: How much of the noxious effects on therapy of a neurotic countertransference can be avoided by intellectual insight —that is by knowledge of its existence?

To illustrate this point I would like to refer to a paper I found in the *Psychiatric Quarterly* (Jacobson, 1950). The paper is entitled "Psychodynamic modification of electric shock treatment". The author's theoretical attitude to E.C.T. is that "an explosion of cerebral energy brings about a restoration of mental health". He therefore probably relates E.C.T. action with abreactive or cathartic psychological techniques. But he states that "infantile conditioning, complexes, and malfunctioning which are presumed to underly mental illness have not been explored. Buried dynamic material has not been brought to consciousness. No 'depth psychology' is involved." He is very hostile to such "depth psychology" which he rejects. He considers that "the basic psychopathology is the distortion of personal orientation to the environment". He considers that ordinary E.C.T., as well as having a physiological effect, "introduces into psychiatric practice a tremendous pressure variant in the patient's environment". The modification of E.C.T. which the author practises is to apply a minimal current with the Liberson brief-stimulus apparatus which produces a disagreeable subjective effect without any change in consciousness. No convulsion in fact occurs. With an appropriate current, the musculature of the face is so contracted that speech is impossible. This is maintained for 5 seconds. During the subsequent minute the therapist gives positive suggestions to the patient and this is repeated on the single occasion as many as 10-12 times. The electrodes are arranged to produce the maximum pain and the patient is told that to the extent to which he is able by his own efforts to achieve the therapeutic

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goal the shock treatment would become unnecessary. The doctor constantly emphasized that he too wished to eliminate the necessity for further treatment, by developing within the patient a stabilizing factor that had been lost. By this means depressed, manic, paranoid schizophrenic, mental defective, alcoholic, epileptic and psychoneurotic patients were treated. The author feels that his modification introduced into ordinary E.C.T. what he called "a rationale which dignified its use". However, he found that the method "presents problems of adjustment for both patient and therapist". The relationship of patient to doctor, he writes, is greatly intensified. He called the treatment "psychodynamic electrotherapy" or as he preferred to call it PET. This "petting" must be extremely painful and the author prepares his ground by a dynamic or perhaps I should say a pseudodynamic study of the patient's life situation and problems. The patient's need for help and his embryonic transference relationship allows him to accept the pain. The author describes how he introduces his form of "petting" to the patient, to whom he says—"This treatment is going to be somewhat disagreeable. I do not want to hurt you more than I have to. I cannot give this treatment unless you co-operate. I am sure you want to get well, to leave hospital and go home. I will make every effort to reduce your discomfort to the minimum. You must endure the discomfort to the best of your ability." The patients often cried bitterly and one girl whom the author quotes said: "Oh, I know I have been a bad girl . . . but don't beat me again! I have been beaten enough in my life. My father used to beat me with a whip because I was a bad girl." The author remarks that she was abreacting her early experiences, but in others he found a masochistic response. One said, "It doesn't hurt. It feels good. I like it." Still others became wildly violent and panic-stricken and a few became apathetic and unresponsive. The author thought the treatment particularly effective in dealing with hostility in the patients. He states that "One directly confronts the patient with the fact of his *bad* attitude towards those about him and one continues to treat him until one is convinced that his attitude has changed, at least momentarily." It is necessary to add here that the author found that he could not dispense with orthodox convulsion therapy and that his "petting" was liberally supplemented by E.C.T. The terrible method advocated in this paper needs no further comment except this. Probably few could read this paper without recalling the mediaeval attitude of identifying illness with sin. The "bad" attitudes of the patient must be changed by pain and punishment. The patients' illnesses are still the same but modern society has buried much of its overt hostility, fear and guilt. We must be very careful to see that we do not use modern technology as a cover to express, however unconscious we may be of it, these concealed elements of ourselves and our society. It is necessary, I think, to consider very carefully not only the therapeutic efficacy but also the motivations which have led to the development of the great variety of new methods of "shock therapy" and of abreaction, and suspicion should be aroused whenever a new method or technique involves a patient in physical suffering over and above the mental suffering which is intrinsic in the case of a cathartic method.

I now wish to turn to the prevalent assumption among psychotherapists that these physical methods of treatment E.C.T., insulin and surgery owe their efficacy either to the cerebral damage they produce or to the strictly psychological effects in the form of a threat of punishment, death, assault, etc. I think there is enough evidence now to make both these assumptions unjustified. Time does not allow me to review today evidence which contradicts them, and certainly much of this evidence is known to you. Certainly some reversible or irreversible changes are produced in the nervous system by these treatments.

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The use of preconvulsant anaesthesia with pentothal has not affected the efficacy of E.C.T. Steinfeld (1951) points out that although it may be argued that though the patient is then not consciously aware of the shock treatment, his unconscious still registers the occurrence. But such unconscious awareness of violence directed against the self cannot be perceived as punishment, because a participation of the conscious is equally necessary. Further Steinfeld—an unusual analyst who has given E.C.T.—states that "neither subsequent analysis nor interpretation of the patient's behaviour shows the presence of such prehension". There is I should have thought sufficient evidence to contradict the idea that these treatments act only by reason of the *meaning they have for the patient*. It would seem justifiable on the basis of the neurophysiological, anatomical and biochemical research on the effects of these treatments to suggest that changes are brought about within the physiological organization of the patient which themselves affect the position of the patient's ego. For example, Roth (1951) has shown that E.C.T. brings about a marked change in thalamo-cortical relationships—a change of a reversible and functional nature within mutually interacting systems of normal neurones. This is not the effect of a simple brain damage. E.C.T. moreover mobilizes those hypothalamic-endocrine systems which are concerned with the body's response to stress, whatever its nature—and there are many more.

The situation for insulin and cerebral surgery is equivalent. Hypoglycaemia, for example, besides depressing functions of the C.N.S. in an orderly manner down the neural axis from cortex to medulla, causes a progressive excitation of the autonomic elements within the brain, particularly those organized within the diencephalon. The repeated total discharge of these autonomic elements, which affect both the cerebral cortex by upward discharge, and the peripheral systems by downward discharge, mobilizes defensive or homeostatic mechanisms which as Gellhorn and others (Hill *et al.*, 1951) have shown are hyporeactive in many patients suffering from schizophrenia.

The relationship which a psychotherapeutic programme, whatever its nature, cathartic, analytic or educative, will have to a physical method of treatment and the influence which such treatment will have on the psychotherapeutic programme, is necessarily dependent upon a clear understanding of precisely what happens to the patient's ego-situation as a result of the treatment. If it is accepted that the psychological meaning which the treatment has for the patient is not *alone* or even prepotently the therapeutic weapon by which the physical methods work we can examine the views of those who take the matter further. Between 1940-1944, which in the U.S. was the time when the first great wave of enthusiasm for these treatments began to recede, a series of papers relevant to this appeared. Two contradictory points of view emerged. One was that in shock therapy the patients experience a release from the tyranny of the super-ego. As early as 1937, Jelliffe had expressed this view that such treatment was "an onslaught of the death instinct". The quite opposite view was also expressed. At this same discussion Glueck assumed that the forces of control and repression are strengthened in some unknown way. These contradictory views have been held since. Most of my contemporary correspondents, for example, emphasize that shock treatment *increases* repression so that the patient is less amenable afterwards to the analytic process. Weigert (1940) tried to reconcile these contradictions. In her view, as a result of study of patients undergoing E.C.T. and narcosis, the tyrannical super-ego is replaced by attacks from reality, and the ego tries to adjust to this reality more or less fortunately by new control and new repression. Since the patient's interest and attention is thus directed to reality

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again, he has a heightened readiness for transference, and an outward turning of libido. W. Abse (1944) in this country considered that convulsive therapy operates by reason of the fact that it is a danger signal, a potentially traumatic situation, calling forth anxiety and hence setting in motion the defences of *repression*. He wrote: "convulsive therapy is a reversal of psychoanalytic technique, since it leads to reinforcement of the most powerful mechanism of defence possessed by the ego, that of repression. This is not the most desirable, but it is an effective method of establishing a new equilibrium in the psyche. Repression is not more conducive to freedom in the economy of the mind than martial law is conducive to freedom in a country fearful of attack." By way of comment it may be said that if repression is the main or only mechanism activated by shock therapy it is indeed surprising that more cases of anxiety neurosis and hysteria are not benefited from it. Further we have to account for those not unusual patients whose psychoses are made worse by E.C.T., and then there is the undoubted fact that preconvulsive anaesthesia has taken much of the threat out of the treatment, although of course it is true that the physiological results within the nervous system are those of a response to a profound unspecific threat. What, also, are we to make of the observation that E.C.T. is sometimes followed by an abreaction and verbal release of hitherto unexpressed material?

This last observation has impressed many workers, both those who have approached it from the psychological and from the physiological aspects. E.C.T. is seen as catharsis, if not at a verbal-symbolic level, then at a visceral-motor level. It is well known of course that among institutionalized epileptics irritability, tension and aggressiveness is relieved by the advent of a convulsion. Indeed the best way to treat an epileptic with an early psychosis in which hostility is directed outwards, is to stop anticonvulsants and allow the subject to have some fits. In a few patients of my own whose epilepsy has been stopped by temporal lobectomy, the psychosis has increased and tension become so extreme that E.C.T. seemed a correct procedure and indeed this has proved the case in a few. From a different approach Lieberman and Hoenig working on observations made since the war in the insulin unit of the Maudsley Hospital have shown a significant relationship between the presence of epileptic symptoms during insulin coma therapy of schizophrenics and the likelihood of remission from illness. The occasion of frequent spontaneous seizures and myoclonic jerks during such treatment is of good prognostic omen. We understand epilepsy as a vast generalized discharge of the nervous system and it would be logical to identify this with the cathartic process at the psychological level, but this assumption cannot yet be made with confidence. Intrinsic to the mechanism of generalized epilepsy are discrete elements which have to be viewed differently. These are the observations on that type of epilepsy which affects thalamo-cortical relations; they can and frequently do occur without a general convulsion. The best example is the spike and wave phenomenon. It often seems that the occasion of this type of discharge supervenes at a moment of psychological tension and is a response obliterating consciousness at a convenient moment. Wayne Barker has demonstrated this effectively and it is common clinical experience. This is much nearer to what we understand by repression. My own EEG studies on schizophrenics have convinced me that the brains of some of the patients, particularly the catatonics, can organize themselves in such a way that epilepsy of the thalamo-cortical variety appears and that when this happens its significance can be understood as an intrinsic homeostatic defence. If such patients suffer a convulsion, that convulsion is observed to be beneficial to the patient. The matter in psychological terms can be viewed either way. It is both a discharge of excitation at a

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visceral-motor level and perhaps a method of repression. After it, the ego of the patient turns outward towards the environment and the transference relationship, previously impossible, becomes a possibility.

The point of view that I would wish to put before you then is that in convulsion therapy we are not only offering an assault on the patient's ego from external reality, but we may also be activating a mechanism inherent in every individual by which the ego can handle intolerable situations. This mechanism not only involves the discharge of dammed-up excitation but also strengthens the ego by increasing defensive repression. If this is so then the rationale of convulsion therapy is, as Abse believes, in direct opposition to the aims of any strictly analytic procedure. In analysis the transference is used to make the patient re-live his past affectively, the analyst using his knowledge to interpret to the patient in such a way as to increase his conscious control and awareness. The decision to give shock therapy is the admission on the part of the psychiatrist that this process is for his patient either impossible to achieve or too dangerous for the ego-stability of the patient. Having made the decision the psychiatrist hopes to discharge tension at a non-symbolic level (i.e. a visceral motor level) and to strengthen the ego by repression. The transference relationship which emerges must then be used, not to increase ego-awareness, which the treatment is aimed at diminishing, but for purposes of positive education in obtaining gratification from relationships in the patient's environment. To quote Abse: "Freud has stated that education can be described as an incitement to the conquest of the pleasure principle and its replacement by the reality principle; it offers its aid, that is, to that process of development which concerns the ego; to this end it makes use of rewards of love from those in charge, and thus it fails if the spoilt child thinks it will possess this love whatever happens and can in no circumstances lose it."

I will now turn to the operations on the frontal lobes. As you know these operations have aroused the greatest hostility from psychopathologists. I have already quoted Dr. Winnicott's view. It is particularly unfortunate that this hostility has appeared for the most part from those who have had the least experience of patients treated by surgery; in fact the basis for it lies in the philosophy of life which psychoanalytic theory provides. Dr. Jan Frank, whom many will remember when he worked in this country, is one of the few psychoanalytically oriented psychiatrists who have had extensive experience of leucotomy patients. Dr. Stengel is another. Frank writing from the States in 1950 deplores this emotional over-reaction among his colleagues which has expressed itself, he believes, in a conspicuous dearth of contributions to the theme in analytic literature. He is particularly surprised at what seems a lack of interest because these operations significantly interfere with psychic activity, causing thereby (to quote him) "a quantitative shift of instinctual impulsivity and changes in its psychic representations", and it alters certain facets of ego functioning. Frank agrees with Stengel (1948) when the latter wrote, "that the psychoanalyst believes in the power of love and reason. That is, he is fundamentally a strategist and feels about the more violent forms of physical treatment as a highly trained military strategist must feel about atomic warfare." But once again it seems that the preoccupation is with such treatments as causes of cerebral damage *only* and there has been a tendency to ignore evidence that demonstrates that over and above this there are specific changes in neural organization which modify the situation of the patient's ego. How is it that the ego state of chronic tension and preoccupation, which leads to psychotic or socially undesirable behaviour or to constant crippling neurotic defence, is reduced? Is it entirely a response of the

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ego to brain damage as Goldstein suggests, or is there something specific for ego-functioning in the severance of frontal thalamo-cortical interaction or in those cortical pathways involved in the activities of the visceral brain, which we can see at work in such operations as cingulectomy? We still do not know these answers, but in so far as a decision to perform a "psychosurgical" procedure is part of our psychotherapeutic programme, and I suggest that we should never view such a decision in any other light, then it is incumbent on us to consider such effects as are known very carefully. All psychoanalysts tell us that it is impossible to start or continue this form of psychotherapy after operation. The reason given is that free association, the basic rule of the procedure is impossible for the patient. It is impossible for him to see psychological connections, nor can he enter into a transference relationship in the usual sense. It seems that his ego-boundaries are constricted and narrowed: he is more egocentric, tactless, aggressive, demanding and searching to gratify his immediate needs. Frank (1950) considers that the lack of spontaneity and initiative of the leucotomized patient is not only a defect showing constriction of the ego, due perhaps to brain damage itself, but also a defence against the fearful experience of not being able to master reality. Goldstein also postulated that the change to concrete attitudes shown by the brain-damaged is a defence or protective mechanism of the ego. In a valuable and interesting paper Klein (1952) divided the post-operative symptomatology of his leucotomy patients into two groups. The first group included perseveration, inertia, verbosity, manic-like condition, associative poverty, disorder in thinking and conceptual weakness. These symptoms were variable and not always present. They were related to the immediate post-operative state and less permanent. The second group of symptoms constituted a more permanent change in personality and were found in all patients studied. Among these the most important in Klein's opinion was the *discontinuity in the pre-operative ideation.* To quote him: "We may assume that there is in normal persons as well as in well-integrated psychiatric patients a basic attitude, which arises from past experience, and is partly organized and partly fluid. Its organization and synthesis to a definite pattern peculiar to an individual may be called the ideatory scheme. When mental activity involving approach and conduct takes place, this scheme is activated so as to form the ground on which mental process may progress, securing thereby the continuity of the personality. This process has been profoundly altered in our patients." Klein likens the *ideatory scheme,* which he suggests is dependent upon frontal thalamo-cortical connections, with the body scheme which is dependent upon more posterior but similar connections. He believes that when the ideatory scheme is blocked and the "flow of fluid background material reduced, there is no material from which to build up or elaborate the situation to a problem stage". Therefore no tension can arise. This ideatory scheme, postulated by Klein, is distinct from other preconscious and conscious functions such as memory, intellectual capacity and so on. It would seem to be a functional organization in which the meaningful events of the external world are related to the internal world of tensions and instinctual excitations, and the product so activated presented to the ego. Without it the ego is able to ward off such excitations, or as Frank (1950) put it the forebrain is "an important instrument of the preconscious system". There is an emotional "asymbolia" caused by lobotomy "which drains away a psychic dimension". Whatever our theoretical construct about these operations may be we are left with the evidence that quite apart from the psychosis and all the faulty behaviour patterns which have resulted from it perhaps over many years, the patient who has been subjected to a surgical procedure of this type is a potentially lesser

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person. Psychotherapy, certainly of the analytic and probably of the cathartic variety, will be for him impossible. Surgery will in fact have burnt the psychotherapeutic boats. But educative and occupational psychotherapy, persuasion and the re-establishment of normal and socially desirable methods of obtaining gratification of needs are necessary and are all that are possible. Lastly there is general agreement that if the therapeutic goal is to secure the discharge of any given patient from hospital, then there is an absolute necessity to establish that there exists supporting and accepting attitudes in the family to which the patient is to be returned. The patient who has no one to accept him after operation cannot make an adjustment outside hospital.

I would like now to summarize the main points which I hope will emerge from this rather diffuse discussion of my subject.

(1) E.C.T. and cerebral surgery, and probably insulin coma therapy stand apart from the other physical methods of treatment since the latter's sole function is in the facilitation of a psychotherapeutic technique of catharsis. The former group, however, act in direct opposition to those processes which are usually regarded as psychotherapeutic—namely the increase of ego-awareness and control. As a result of psychosurgery it appears that the ego is protected from the onslaught of excitations against which it has either failed to adapt or made a constant maladaptation. The price paid is a narrowing or constriction of ego-boundaries and in some degree the patient thereafter is a lesser person in psychological potential, with diminished capacity for self-awareness and for the depths of emotional experience. E.C.T. also reduces self-awareness and for a variable time after treatment reduces the capacity for developing it, but also there is the possibility that in addition to a *repressive* mechanism, a discharge of tensions at a visceral-motor level is achieved during treatment. Less is known about insulin therapy, but the effects may be similar. The price paid by the ego in these treatments seems small indeed when it is put against the continuance of an intractable and disabling mental disorder, but this statement only is true when the treatment offers a real chance of recovery or amelioration.

(2) These considerations do not invalidate these procedures in any way, nor can they detract from their usefulness, which is firmly established. But the results are too uncertain to warrant complacency, and this suggests that greater attention should be directed to the psychological consequences and the way in which such treatment will affect any given patient. To do this a study of the psychological structure and the psychopathology of every patient is as necessary before the decision is made to exhibit one of these treatments as the recognition of any constellation of symptoms in a patient.

(3) There is a risk that a psychiatry dominated by physical methods of treatment, and promoting little but physiological research related to them, will regress to unpsychological attitudes to mental disorder such as existed at the beginning of the century when Kraepelin had laid the foundation of his descriptive work.

(4) Study of the analytic literature suggests that the psychiatrist's counter-transference may often play a part in the choice of, and the manner in which a physical method of treatment is given. The counter-transference may have serious consequences for the patient, and seriously militate against the success of such treatment even if it does not cloud the judgment and objectivity of the psychiatrist to the patient's detriment. The enormous elaboration of new techniques for abreaction and shock suggest here and there, that such developments may not be free from the influence of such noxious counter-transference.

(5) It is surely most harmful to our subject that the present situation of two

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psychiatries each hostile to the other should continue. Those trained in psychopathology work for the most part outside mental hospitals; those trained in the physical methods of treatment work for the most part in mental hospitals. An adequate basic training in psychopathology for every psychiatrist would go some way to alter this, but the inclusion on the consultant full-time staff of every mental hospital of such a person would be an immediate measure worth considering.

(6) If the results of the physical methods of treatment, particularly those used for schizophrenia, give no reason for complacency, we can also view with dismay our inability to select with any degree of confidence those patients who will benefit from such treatments. It is possible that one of the reasons for this is the predilection for using symptom-groupings as the basis for choice and the neglect of the patient's problem as essentially and always a psychological one. As Sargant and Slater put it "Psychotherapy should indeed precede, accompany and terminate physical therapy."

(7) The prevalent opinion among psychoanalysts and Jungians that these treatments act either by reason of the meaning they have for the patient in terms of punishment and assault, or by reason of the simple brain damage they produce is not supported either by clinical or physiological research.

(8) A more realistic acceptance on the part of psychopathologists of the immense burden of the mentally ill on the community and the pressure in terms of time and demand which this brings upon their psychiatric colleagues would lay the grounds for a rapprochement. We are in this respect, I believe, a long way behind the United States.

I appreciate that having put myself in the position of one who has taken some shots at both sides in what has often been a most disagreeable contention, my views are unlikely to find favour with either side and in so far as I have been able to produce any argument at all this can be attacked from either side. My only reason for boldness is the dismay which I feel at the possible continuation of the present state of affairs. My wish, like that of everyone present, is to see a psychiatry which is one and undivided and which, to my way of thinking, must be one which is fundamentally psychologically oriented.

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