THE NATURE OF AUTOHYPNOSIS IN THE LIGHT OF CLINICAL EXPERIENCE.

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[Received 22 October, 1952.]

INTRODUCTION.

IN December 1950, Salter's valuable book *What is Hypnosis?* (1) was published in England, and some months earlier Strauss (2) had pointed out the wide implications for medicine of Salter's observations, were they confirmed, and indicated the more resistant nature of psychogenic pain, compared with organic pain, to amelioration by hypnotic suggestion. The present article reviews three very different cases in which, at some stage in treatment, an autohypnotic approach to pain was used, and a further case in which autohypnosis, as a means of relief of pain, had been discovered accidentally by the patient. An attempt is made to relate the results and information obtained from these cases to Salter's work and views on hypnosis.

MATERIAL.

The cases presented differ from Salter's material as to age, motive for presentation, and state of well-being. Salter's subjects were young, healthy adults from 22–30 years selected for sound personality and ability to make relationships easily and well; they entered the experimental situation for purposes of monetary gain and/or interest. The patients here presented ranged in age from 33–75 years and were suffering from disabling or highly inconvenient symptoms, for which they sought relief. Two of the patients formed relationships readily, but only one (Case 3) was emotionally well adjusted, the other (Case 1) being neurotically barred from anything more than transient, erotically toned contacts. Case 4 showed a decline from an earlier, more satisfactory pattern of adjustment. In three of the four cases cited both psychogenic and organic factors were clinically relevant; the relationships of these factors to the pain were different in each case. Salter does not deal with this type of problem, for, as Strauss says in the foreword to the book (p. 8), " Salter is more concerned with providing an explanation of hypnosis and hypnotic phenomena in strictly scientific terms than in the application of hypnotism to medical practice. He can therefore afford to detach himself from clinical psychiatry." This detachment may well be of significance; for, in the well integrated, normal subject, it is more difficult to discern the various factors involved in a complex reaction, and it is just in this sense that a study of psychopathological material supplements the study of the normal.

SALTER'S VIEWS.

(Page numbers quoted in the following text refer to Salter, *What is Hypnosis?*)

At no point in his book does Salter formally set out his position with regard to hypnosis, but the several points he makes may be presented as follows:

(1) Hypnosis is conditioning (i.e., the elicitation or production of conditioned reflexes by the verbal or other stimuli of the hypnotist).

(2) The hypnotist does not occupy any affectively significant role in the patient's psyche (p. 49).

(3) The source of the stimuli which bring about the conditioning is irrelevant, i.e., the patient may as effectively condition himself (autohypnosis) as be conditioned by the hypnotist (heterohypnosis).

(4) Some 20 per cent. of people are responsive to the techniques of hypnosis and/or autohypnosis.

(5) " Prestige " either (explicitly) with regard to the hypnotist (p. 50) or (implicitly) with regard to any other aspect of the experimental situation is inoperative in hypnosis.

(6) By making use of evidence (usually verbal) supplied by the patient (regarding his reaction to his own state during the preliminary phases) the hypnotist is enabled more rapidly and effectively to induce hypnosis by what Salter terms " the feed-back method."

(7) Salter claims that the hitherto generally held dictum that an hypnotized subject cannot be induced to act against his moral standards is no longer valid.

Technique.

Of Salter's three techniques of autohypnosis the one used in the cases to be described was that of post-hypnotic suggestion with regard to autohypnosis (technique 1, p. 68), although in Case 3 this was modified in that the patient was, early in the course of treatment, introduced into " control " of the situation.

In general terms the patient, after receiving a preliminary explanation of the purpose and technique of the treatment, was hypnotized. When hypnosis was satisfactorily established mobilization of the body schema was undertaken, including—(*a*) impairment and abolition of motor power, (*b*) induction of vaso-dilatation and vaso-constriction, (*c*) induction of anaesthesia and analgesia.

Training was carried out on symptom-free parts of the body, and finally the changes were induced in the affected part. Autohypnotic ability to induce the changes in function upon himself was conferred on the patient by post-hypnotic suggestion once the mobilization of the body schema was achieved, but before the symptomatogenic zone was treated. Thus when the affected part was in fact submitted to suggestion, and the patient was introduced to autohypnotic control of the symptom, he had already acquired skill with regard to parts of the body having less emotional significance.

Case 1.

A married woman, aet. 33, with one child, had suffered for nine months from pain in the teeth and jaws. For this condition (regarded by a senior dental surgeon as osteitis) she was undergoing a series of dental operations, including extractions, resection of the gums, and channelling of the jaw bone. The distribution of the pain involved the lower and part of the middle divisions of the left trigeminal. The corresponding areas on the right side were less affected. Operative procedures had been undertaken, from time to time, during the previous nine months, and the patient's resistance to the unremitting facial pain was failing. Such was the position in March, 1949, when she was first seen by a psychiatrist, who made a diagnosis of " anxiety state and insomnia arising out of organic pain in a somewhat immature subject." At this point a short narcosis with barbiturates was decided upon, but the psychiatrist becoming ill, the author was asked to take over this aspect of the case. A cursory review of the history gave no reason for doubting the diagnosis, and the patient responded satisfactorily to barbiturate sedation with the addition of moderately heavy doses of vitamins.

Towards the end of May of the same year the patient was seen again, in a very similar state of anxiety and insomnia after having undergone a further series of operative measures, and she again responded to a short narcosis. Before she left London on this occasion, however, her history was once again reviewed and nothing untoward came to light, apart from apparent trivia, which later were to bear a different implication, such as fainting twice in church in adolescence, finding the single-handed running of her house unduly burdensome, and worrying, apparently justifiably about nursing-home expenses.

One month later the pain was present but bearable.

At the end of July it was learned that the patient was in hospital in another city and that, in view of the gravity of the pain, alcohol injection of the third root of the left fifth nerve was to be undertaken two weeks later. Although this produced anaesthesia of the chin and the side of the tongue, and a two-day remission of pain, it was followed by hysterical behaviour disorder with increasing pain. She spent one day as a voluntary patient in a mental hospital, but was quite unco-operative and unmanageable. In this condition she was brought back to London in late August and a further narcosis was decided upon.

This third and deeper narcosis was continued for ten days, as opposed to the four to six days of those earlier. She again responded, but on this occasion less completely, and the complaint of pain of unbearable degree persisted. At this stage she was seen again by the dental surgeon, by two neurologists, one neuro-surgeon, as well as by a general

physician. From all these opinions her London general practitioner could not obtain sufficient agreement to advise for or against further dental surgery, or further interference with the lower division of the left trigeminal. Advice to inject the Gasserian ganglion with alcohol was strenuously opposed on psychiatric grounds, in view of the history of the reaction to the injection of the third root, although some action was pressed for in order to alleviate the organic factor in the pain, without irretrievable anaesthesia.

In this confusion of opinion further psychiatric advice was sought, and Dr. E. B. Strauss advised treatment of the pain by autohypnotic training (thereby suggesting the first experiment in the clinical application of Salter's views). At this point it was considered by all who had seen this patient that (1) there was significant organic pain ; (2) the patient reacted to this pain hysterically and her general adjustment and control had become impaired ; (3) there was no evidence (obtainable on direct clinical interview or from the relatives) that the patient suffered from neurosis.

The clinical picture and the psychiatric evaluation of the case, however, altered radically from this point on. Once trance was established, which was very easy, the patient exhibited symptoms of acute emotional distress, and inquiry released a torrent of very erotic material concerning her present phantasies and her guilt-feelings in relation to them. This material in succeeding sessions rapidly gave way to historical material and transference reactions, the latter being erotic in the extreme. During the first five or six sessions the time was divided between catharsis and training in the autohypnotic induction of sleep and motor paralysis. This latter aspect was then shelved for the time being (and its applicability tested from time to time), as it was now quite clear that the value of the autohypnotic training was, for the time being, much less than the value of the hypno-analytic psychotherapy, and the patient was not progressing beyond the stage of motor paralysis and some poor vascular control. During the course of psychotherapy the patient complained less histrionically of the severity of her pain, and as treatment proceeded her consumption of analgesics and sedatives decreased. It became clear during treatment that she had previously withheld information of which she was quite clearly aware, and which would have enabled a chain of probable psychogenic cause and effect to be related to her symptoms of jaw pain. The essential psychopathology involved unresolved guilt-feeling concerning sexuality, and an identification of sexual gratification with the illicit (to which she was repeatedly strongly tempted, but which she feared too much to allow herself full gratification). A half-hearted extra-marital attachment had developed some years earlier and had been suspended by circumstances, with consequent loss of interest and energy, depression, moodiness, and insomnia lasting for several months and followed by erratic bursts of gaiety aud energy. Her symptoms of pain in the jaw developed first when (having accepted the assignation) a root abscess " made her feel too ill " to keep a rendezvous suggested by the third party after an interval of silence. From this time on, although the tooth was extracted and the abscess drained, her pain persisted, at first in bouts, and later continuously, and spread through her jaw, accompanied by evidence of local physical change. Her personal past history was in keeping with her current emotional problem, and involved erotic attachments to unattainable men, with change of affection into repulsion when the relationship threatened to involve the physical aspects of eroticism.

Throughout treatment a very strong positive transference was present, becoming erotically rather less highly coloured in phantasy as time went on.

Once psychotherapy (which was attended by all the usual phenomena of an hysteric reacting strongly, e.g., temperatures, fake sweats, weakness, headaches, emotional crises, etc.) was concluded and the patient adjusted more or less satisfactorily to her then present conditions of life and her commitments, autohypnotic training proceeded smoothly. Induction of anaesthesia in arms and legs preceded the induction of anaesthesia in the face. The patient learned to put herself in trance for five minutes each morning and to give herself post-hypnotic suggestion regarding analgesia of the face for the rest of the day, after she had observed the state of the pain. (She remained under dental observation.)

At this stage therefore the patient was able to control her awareness of the residual organic pain in her jaw, and was reasonably well adjusted to her conditions of life and her emotional make-up on the basis of a persisting positive transference. An attempt by the author to interpret the significance of this last factor and to dispose of it was met by the patient with a reaction of " hurt pride," and she decided at her next interview that she would discontinue her (by now monthly) attendances. She has remained well for two years. The present state of the dental condition is quiescent. Analgesia is induced autohypnotically as occasion demands.

This case illustrates—

(1) Canalization of psychogenic stress along paths of organic symptoms.

(2) Blocking of autohypnotic technique by psychic stress.

(3) Successful autohypnotic treatment of the organic symptoms once the emotional stress was resolved.

(4) Persistent positive transference, an attempt at the resolution of which induced the patient to discontinue treatment.

Case 2.

A spinster, aet. 40 (a teacher of biology and civics), suffered from a depressively coloured anxiety state with insomnia of long duration. The condition had worsened repeatedly at times of stress such as sitting for examinations, etc., and particularly at times of stress involving her parental relationships. In addition to her psychiatric disability she suffered from chronic osteomyelitis of the right leg, with wasting and trophic changes associated with a good deal of pain.

The exacerbation of the anxiety state for which she sought help had been present for several weeks, and was precipitated by increased demands on her by her aged parents owing to her mother's illness. Psychotherapy with another therapist lasting several months had been beneficial three and a half years before.

Treatment was undertaken by means of narco-abreaction with thiopentone (and ether as occasion demanded).

Much hostility to her father associated with a good deal of guilty feeling was released. Ambivalence towards the mother and the elder sister, who had left home, was also ventilated. The usual parental identifications with authority figures, particularly her professor (she was a part-time student for a further degree in Social Science), were explored and confronted. Her conflict in relation to an inclination to leave home and her neurotic sense of duty was exposed and she was able to resolve this by a rearrangement of her affairs. Her libidinal need was clarified and its present and future probable frustration was accepted, as also was her tendency to generate anxiety in stressful situations, which now, however, was almost controlled. Finally in some three months of treatment she became more fully and stably adjusted to her undoubtedly difficult life situation. At no point in treatment did it appear that she used her physical disabilities hysterically, although she tended on occasion to use them as vehicles of rationalization when avoiding situations liable to put her at a disadvantage. Throughout treatment her attitude to the therapist was predominantly cordial and co-operative in the conscious state, and only in states of marked emotional release under narcosis did elements of resentment or hostility appear. These were limited to situations in which overt father-identification occurred. Their recollection and interpretation by the patient proceeded readily enough.

Treatment of the neurosis having been satisfactorily completed, the patient, hearing of autohypnosis, inquired of its possible value in relation to her physical pain and the apprehension regarding further physical illness which she experienced when the pain in her leg grew worse (as it did from time to time), and interfered with her sleep. (She had undergone many operations on account of her bone disease, and had hence been away from work a good deal in the past years.) It was decided to try the experiment. To begin with all went well. Hypnosis was fairly readily induced, and with it motor paralysis of the unaffected limbs could be achieved. Vascular changes in the hands were elicited and also in the healthy leg. A particular point was made of associating all these changes with a mental state of calmness and poise. When it came to auto-hypnotic application of conditioning to the painful limb the patient experienced a sense of anxiety and conflict, finally saying, " I can't quite let the pain go—it is a warning signal, and if I missed it I might be the worse off." Compromise was reached (eighth session) by replacing the pain and its associated anxiety by " discomfort and concern." Fortuitously at this time she was faced by a good deal of unexpected professional stress due to unheralded reorganization of her school and university life, in which she was in each case adversely affected, partly owing to her own mismanagement of affairs.

In reply to her plea for sympathy (the first she had overtly made in a neurotically dependent way) her contribution was firmly pointed out to her and related to her psychopathology, which she had recognized. The result was a dramatic irruption of hitherto unexpressed hostility dating back to the previous phase of psychotherapy, when it had appeared that the father identification had been sporadic and near-hypnoic. Equally striking was the almost total loss of the power of autohypnosis and the learned conditionings, although the benefit obtained from the narco-analytic phase remained. The negative reaction spent itself in a series of bitter letters and two near-tearful interviews. One month later she came one morning in a more quiescent frame of mind, with her limbs in a variegated state of sensory change. Her left leg was hot, her right leg near-numb. her right arm cold and her left arm powerless, " just for fun as I came along." The insomnia did not fully respond, and the experiment was terminated with the re-establishment and consolidation of the autohypnotic ability, without further intervention by the therapist.

This case illustrates—

(1) Concurrent physical and psychiatric disabilities, with no apparent hysterical exploitation of physical symptoms.

(2) Apparently successful treatment (narco-analytical abreaction) of the psychiatric state.

(3) Subsequent successful induction of autohypnotic control of physical symptoms and their emotional effects.

(4) Disruption of autohypnotic ability associated with the release of hitherto unexpressed negative transference.

(5) Spontaneous re-establishment of autohypnotic ability associated with resolution of hostility, and without further hypnotic assistance from the therapist.

Case 3.

A married man, aet. 75, suffered from pain in the right phantom leg after amputation above the knee eight years earlier on account of popliteal aneurysm. From that time any emotional stimulus was liable to evoke pain or disagreeable sensations in the stump or in the phantom limb. Lancinating pain shooting down to the phantom heel also occurred from time to time. Particularly evocative of severe pain were simple associative phenomena, such as seeing children jump and land, jarringly, on their heels. On the whole pain was well controlled with 50 mg. pethidine by mouth daily. Occasionally (once in six or eight weeks) an injection of scopolamine gr. $\frac{1}{3}$ was necessary.

The personal past history included coronary thrombosis on two occasions, twelve and eight years ago, and two short-lived depressive attacks in one year, twenty years ago, which resolved spontaneously.

The family history was striking in that both parents and the three siblings died of heart disease. In business, domestic and social life he was happy and successful.

Autohypnotic training, with a view to relief of pain, by Salter's technique I was undertaken, but was deliberately modified in order to minimize the role of the hypnotist. Initially the patient was very sceptical of the possibility of hypnosis, but when at the end of the first session he found he was in light trance he was impressed and rather perturbed. He made remarks such as " incredible that it should happen to me," " a touch of the old black magic," and laughed about the situation in a rather nervous way. These reactions occurred in spite of a preliminary discussion in which " hypnosis as conditioning " was explained to him and the stage atmosphere was directly discredited. The induction of hypnosis was carried out in a brightly day-lit room, and a silver pencil was used as the fixation point held in a position where no eye muscle strain was involved. Commands were entirely avoided, as were exhortations. At the next session Salter's technique was modified by inviting and encouraging the patient to induce his light trance upon himself (instead of increasing his sense of submission and " magic," by subjecting him to further hypnotic experience for which in the face of his perturbed reaction, or even by virtue of it, he was " ripe "). This was done by repeated induction of sleep alternately by myself and by the patient. At the fourth attempt he was successful. At the fifth attempt the pencil was mechanically supported in the requisite position. By the seventh attempt the induction was linked to his breathing rhythm, seven breaths being his trance signal. This had been achieved by the end of the third treatment session. By this time the patient was completely reassured and had lost his perturbation. He continued to be amused at this strange and unexpected faculty which he had discovered in himself. He went away for one month and continued to practise light trance induction daily. When he returned for further treatment he expressed his pleasure with the technique, which had increased the enjoyment he derived from his afternoon rest.

The next phase in treatment was to use his self-induced trance, or the trance I induced, to engraft suggestions of loss of motor power, sensation, and vascular change. All these were applied to the upper limbs and all were partially successful and no more. Three further sessions were thus spent, at the end of each of which he was regretful that he could not " do better " but did not show surprise or disappointment. When at the end of the sixth session I informed him that I felt progress was too slight to warrant continuation, as very deep anaesthesia and analgesia would be needed to be of value in his phantom limb pains, he agreed entirely, and averred that the whole experiment, though failing in its initial object, had been a most interesting experience.

This case illustrates—

(1) Neurogenic pain with spontaneous conditioning to analogous phenomena—no overt history of neurosis.

(2) Anxious response to the experience of being hypnotized, i.e., " subjugated."

(3) Reassurance when taught to induce his own light trance.

(4) Subsequent limited success in the development of vascular and anaesthetic changes—" I can't quite let it go."

(5) The deliberate yielding of the therapeutic dominance resulted in re-establishment of the patient's basic negative attitude to the possibility of hypnosis, the reassertion of his own sense of non-suggestibility, and failure to develop further conditioning.

Case 4.

This case differs from the preceding ones in that the patient, aet. 73, had spontaneously developed the ability to put herself into a light trance-like state, and autohypnotic techniques were not used in the attempt at treatment of this case. (She was seen in 1947, i.e., before the publication of Salter's monograph.)

The presenting symptoms were of pain involving the *right* fore-quarter, from the base of the neck to the lower ribs and spreading down the upper arm as far as the elbow. Particularly acute pain was felt in the breast. The symptoms dated from an attack of shingles three and a half months earlier, which was associated with a pneumonic condition of the *left* base. On examination there were residual scar marks over parts of the distribution of C.6, and D.3, 4, 5, posteriorly on the right side. This patient had sought treatment from a great number of practitioners (but had refused x-ray treatment), obtaining relief of a few days' duration on some occasions. Subsequently she also benefited, temporarily, from what was described to her as " Radar " treatment !

The patient had been married for forty-nine years, her husband being 76 years old. She had a married son aged 48, who was overseas, but contemplated returning to England on account of her ill-health. She missed him very greatly. Her daughter, aged 45, was also married, but lived nearby. In the past the patient had been, domestically and socially, a dominant person, but in the last twelve years had been hard of hearing, and more recently had become somewhat reduced in circumstances. Her life, consequently, now lacked a goodly proportion of the colour which she had always enjoyed.

The patient quite overtly exploited her pain socially and domestically, and used it in the following tyrannous manner. She had discovered that by clasping her hands on her abdomen when recumbent she could enter an hypnoid state in which she no longer felt the pain, and in which she felt relaxed, as if she were floating, and experienced a sense of ease and well-being. The pain was reduced after such exercises, which occupied 30–40 minutes, for periods up to two hours, and so the procedure was repeated several times daily. In order that this technique be effective, she needed an assistant, either her daughter or her husband (who was severely disabled by arthritis). The role of the assistant was to kneel at the side of her couch and place one hand on her forehead and the other on her clasped hands. This position had to be maintained without movement by the assistant or the effectiveness of the seance was destroyed. The cost in physical discomfort to the husband was great, and the cost in domestic dislocation to the daughter was considerable.

Reluctantly I agreed to the general practitioner's request to attempt to treat this hysterically reinforced and prolonged pain by hypnosis. On the first occasion, at the patient's request, I occupied the role of the assistant, and witnessed the development of increased regularity of breathing and catalepsy of the eyes. She seemed to be in a light trance state. It was impossible to test for anaesthesia because of the immobility of " the assistant " required by the patient. On the second occasion I hypnotized her, in spite of her remarks that it was not possible, etc., and in spite of her complaint of increasing pain during the induction period. Her auto-induction took some four minutes. Under hetero-suggestion some ten minutes were needed, and more use was made of a dominating, challenging approach as the minutes went by, with phrases such as " Your eyes are getting heavy," " You cannot keep them open, however hard you struggle—struggle as hard as you can your eyes are closing down," etc. Hypnosis was well induced, and motor paralysis and anaesthesia were rapidly produced thereafter.

Strong post-hypnotic suggestion was given for relief of pain. On recovery the patient expressed surprise, but no pleasure that her pain had lessened. Two days later she cancelled her appointment for the next day. Two days later still a message was received to say that her improvement lasted only one day and that she was now in worse pain than ever and would have no more of the treatment.

This case illustrates—

(1) Spontaneous development of autohypnosis.

(2) Exploitation of symptoms and technique for purposes of domestic dominance.

(3) Lack of insight into the situation.

(4) Attempt to cast the therapist in the role of " son."

(5) Retreat from therapy together with a reassertion of symptoms when her dominance was effectively challenged.

Discussion of Cases.

These four cases may be held to call in question Salter's (1) views regarding the role of the hypnotist in hypnosis, and also, associated with this arises the question of the importance of affect in the hypnotic situation. The role of affect has been, ndeed, quite disregarded by him, although there is evidence in his case-records of

its importance. The curiosity and interest displayed by so many of the hired subjects led them to refuse payment; in other words they were affectively involved in the situation. On pp. 38–39 (M.4) is described the introverted youth who could not respond sufficiently and who was discarded; here is an absence of affective involvement. Similarly the importance of affect is made clear on p. 39 (F.13), when the patient became distressed on account of " obedience " to the hypnotist and the hypnotic training was thereby impaired. On p. 58 (M.52) the affective value of simile involving being in a cave in inducing hypnosis is made quite clear. On p. 72, discussing the second technique of autohypnosis, the importance of using a " well informed and convinced hypnotic subject " is pointed out (in other words a subject for whom the question of hypnosis, its existence and efficacy are affectively highly charged).

Cases 1, 2 and 4 show quite clearly the importance of the affective disposition of the patient towards the hypnotist, and in Case 2 the irruption of hostility was associated with a loss of ability to make use of conditionings which the patient was able to supply to herself quite successfully when the hostility was absent. This case shows that Salter's view, that the source of the conditioning is irrelevant, may be open to much qualification. This is discussed more fully later on. Case 1 preserved the positive transference at the cost of the therapeutic relationship, and Case 4 rejected the therapeutic relationship in favour of keeping her symptoms. In the latter instance had a similar problem been presented by a younger patient, analytical therapy would have been undertaken before any attempt at challenging the symptoms was made. In Cases 1 and 4 the relationship between pain and psychic stress is similar, and the cases show how conditioning may be obstructed by pent-up feeling. This latter point is illustrated, but in a quite different time relationship to psychotherapy, by Case 2, in which therapy had been apparently completely, but in fact only largely, concluded when affective blocking of auto-hypnotic ability occurred.

Cases 1, 2 and 4, may be regarded as instances of partial inability of the personality to maintain full integration on account of emotional stress, while Case 3 is an example of a well-integrated individual. In this instance, however, the very experience of hypnosis evoked anxiety, and the fact that the affective reaction was not exploited is to be related to the failure of the technique. Without an affective response, whether overtly expressed (as by Salter's patients, in terms of surprise, etc. (p. 59)) or not, hypnosis cannot proceed. While the quality (positive or negative) of the feeling is almost irrelevant for hetero-hypnosis, negative affective responses to the hypnotist may interfere with auto-hypnotic ability. Doubtless the ease with which autohypnotic powers are thus impaired is related to the length of time, among other factors, during which the subject has incorporated those powers as part of his own equipment of adjustment.

Cases 3 and 4 both demonstrated the reaction of " submission " to the hypnotist, Case 3 by her reaction of superiority beforehand, (" Young man, you cannot hypnotize me "), and Case 4 by the contrast between scepticism beforehand and anxious incredulity afterwards. Cases 1 and 2 do not show, overtly, this reaction; it would seem that the clarity of expression of this feature of the hypnotic situation would depend, possibly among other factors, upon (1) the personality of the patient and of the hypnotist, (2) on the emotional state of the patient. When there is little secondary gain from symptoms (contrast Cases 2 and 3 with Case 4) the patient is more eager to accept help, and " submission " becomes " co-operation," unless and until negative transference or hostility to the hypnotist is evoked, when " co-operation " becomes " resistance " or " opposition " and the patient must then " submit " to hypnosis. In Salter's cases, just because the subjects were healthy extraverted individuals, selected from many candidates (and were given to understand that only a small proportion of applicants would prove suitable), the likelihood of the overt expression of resistance to hypnosis and hence the elicitation of a submission reaction would be small. Evidence that it did, nevertheless occur, is given in the case records (M.55, F.47, (p. 47) M.40, (p. 41) F.48, (p. 38) F.13). Further evidence is given in his second and third techniques of autohypnosis. (In the second method the patient awaits the hypnotist's sanction before the learned stimuli become effective, and in the third method various concepts are " hammered home " upon the subject; only after he has been " well drilled " at a given stage is a further step taken, etc.)

General Discussion.

Salter (1) treats his material from a behaviourist point of view, and repeatedly asserts " Hypnosis is nothing but conditioning." At no point does he clearly define what he means by conditioning, but it is frequently illustrated by reference to experiments on conditioned reflexes in animals and work involving the autonomic nervous system in man (pupillary and vascular changes). He then proceeds as if these experiments were a sufficient illumination of the complex behavioural, integrated motor and sensory responses of his hypnotic subjects. The significant topic of the relationship between conditioned reflexes and hypnosis will be considered further below. On p. 49 he specifically denies the " prestige " or authority role of the hypnotist as having value, and throughout, in keeping with a behaviourist approach, scouts the question of relationships, attitudes, and conflicts except for mentioning the last on one occasion (p. 39).

Throughout the text, apart from the reporting of the cases and the description of the techniques, it is quite clear that Salter implies that the relationship between the hypnotist and the subject is irrelevant, although he gives a great deal of evidence that, without admitting or taking stock of it, such a relationship is indeed active and important (p. 39 (F.12); p. 41 (F.48); p. 47 (M.40); p. 55 (F.47); p. 59 (M.52)). In addition to these references which concern the case-reports, it is abundantly clear, in Salter's descriptions of his techniques, that the hypnotist bequeaths his power to his subject, who is unable, apparently, to take this power until it is so bequeathed. For instance, in technique 1 the power of autohypnosis is given by post-hypnotic suggestion, and even the allusion to Svengali and Trilby is not insignificant (even on behaviourist principles, where these two symbols connote dominance and submission). In technique 2 the subject is already " drilled " or " convinced " about deep hypnosis, and even though he has the experience of entering such states, and is given a typescript of the stimuli which will become effective, these do not so become until the hypnotist on a given occasion sanctions their use, and may, if indicated, reinforce their power by a degree of hetero-hypnosis. In technique 3, a preliminary procedure of waking suggestion with a modification of persuasion is used to " hammer home upon him " (the subject) the implications of certain experiments in suggestion, and the subject is then convinced that the source of suggestion is immaterial. At this point, surprisingly enough, Salter reverts to hetero-hypnosis, and is careful to warn the hypnotist not to risk failure in the induction of, e.g., anaesthesia, lest the subject's " confidence " (i.e., his sense of security in, and dependence upon the hypnotist's powers and technique) be damaged. After the hetero-hypnotic induction of trance the subject is taught to induce it for himself. Salter admits in describing his technique that he will on occasion use overtly self-contradictory remarks, e.g., when a subject is unable to rouse from trance Salter will say, " Come on, wake up, you're the boss," etc. In other words the subject is (and perhaps Salter too) consistently distracted from the fact that a relationship of submissiveness to the hypnotist and his technique exists. The existence of such a relationship is hardly surprising in that it is a typical response, in various situations, and involving varying extents of the personality, thoughout life.

To consider further the question of " prestige ": Salter considers that he has avoided all use of the influence of this factor by his studied informality of personal approach, but he stresses repeatedly the importance of " technique," and it is quite clear that he has succeeded only in transferring the " prestige " from himself to the science or skill of which he is an exponent. This attitude is one in keeping with our time. " Prestige " is obviously closely connected with the role of the hypnotist as an authority-figure, and this Salter also discredits. However, evidence exists in his case-reports to show how these factors continue to be operative. On p. 39 (F.13) the patient " could have been hypnotized against her will ! " On p. 41 (F.48) the deliberate exploitation of the theme of powerlessness and submission is described. Similar evidence occurs elsewhere (p. 47 (M.40); p. 55 (F.47)), and on p. 59 Salter comments on the surprise and incredulity of the subjects when hypnotic phenomena first occur. In the same way that Salter overlooks the problems of prestige and dominance-submission in their more covert forms, so does he (in seeking to reduce the phenomena of hypnosis and the hypnotic situation to conditioned reflexes and techniques of conditioning) overlook the

significance of affect in the hypnotic situation and the involvement of affect in the actual operation of engrafting of attitudes (or conditionings). The role of affect has been illustrated in the case-reports and discussion of the four cases cited.

Conditioned Reflexes and Hypnosis.

In conditioned reflexes affecting the autonomic nervous system such as the pupillary reflex in Hudgin's (3) experiment and the vasomotor reflexes in Menzies' (4) experiment affect as such is hardly involved; for the experiments are concerned with replacing a usual stimulus by an unusual, but emotionally neutral trigger to an emotionally neutral response. Not only do the subjects " do nothing " when the stimulus " contract " is verbally applied, but they experience no activity for instance (in Menzies experiment) when they murmur " crosses " and the temperature of the control hand drops. To generalize from this sensori-motor arc to behaviour sequences, attitudes, awareness, ethics and body image phenomena, as Salter does, is to overlook the significance of the increasing integration and complexity of the nervous system and the psyche which is recognized by all forms of systematized clinical psychology and which is so clearly formulated by Kretschmer (5). From the literature one may cite examples of the increasing importance of affect and of relationships as this scale of complexity and integration is mounted until, at one point, the phenomena of hypnosis in its traditional sense are encountered. This point is at a non-rational psychic level. Thus, in the experiments already cited, only extended, atypical sensorimotor arcs are involved, and affect and relationships are absent as significant factors. In Pavlov's classical experiments a more complex level of integration, that of the instinctual response is involved, and affect is at once of importance. The sated dog does not respond to the conditioned stimulus. When the conditioned stimulus is not followed by gratification, abolition of the response soon occurs. Stimuli requiring unduly refined differentiation (the ellipse and circle experiment) with alternative hedonic consequences (gratification or pain) rapidly produce disorder of response with affective tension, etc., most readily described as neurotic. In these experiments affect and instinct are both involved and the organism is far from neutral. Similar phenomena occur in humans in similar stimulus-response situations.

More complex still is what may be described (following Kretschmer (5)) as the hyponoic-hypobulic type of reaction. In humans this is occasionally seen in high grade mental defectives and in conditions of fugue, etc. It may be induced in certain individuals by drugs or by adequate hypnotic interference with psychic integration. In states of clouded consciousness, relatively simple and purposeful sequences of actions may occur. Such mental states are unstable and usually transient, and may be regarded as transitional states between instinct-response behaviour and the " partial reaction " of Kretschmer.

To be considered also is the catathymic response, essentially a primitive non-logical emotionally over-invested form of awareness. This is brilliantly exploited, by Wolberg (6) in his hypnoanalytical technique when he induces changes of affective significance in his subject in response to colour, form, and tone, that is, in response to emotionally determined, non-rational sensory experiences. Here affect is involved to a high degree, and object relationship also. These are the levels of deep hypnosis at which positive and negative hallucinations can be induced. To elicit such reactions a major abrogation of the integrated psyche must occur, and a correspondingly powerful relationship with the hypnotist is needed to obviate undesirable perpetuation of the condition. Salter rightly warns against teaching the autohypnotic evocation of this level of the psyche, though he is silent concerning his reasons. Clinicians have long recognized the caution necessary when dealing with such phenomena.

The catathymic response and the partial reaction are the analogues of the cognitive and conative aspects of the fully conscious person. The partial reaction is a state in which instinct claims and complex-determined responses manifest in behaviour which is unaffected by cognitive and ethical considerations. Such behaviour occurs spontaneously when affective stress has eliminated all but crude patterns of relationship, which then remain as channels of expression of massive feeling. In this kind of response affect is significant; goal directed behaviour is marked, and may be, for a period, quite complex. The goal encompasses the

crude reduction of tension by means of gratification of the inner needs, and relationships both with objects and persons are emotionally overcharged, even when the behaviour appears inhumanly callous. At such times the quality of the experience of the individual may be one of clouding of mind or of unreal clarity, depending upon the degree of abrogation of the more highly integrated aspects of the psyche (or the degree of the disintegration). Disintegration to this extent is far from uncommon, may be induced by alcohol, drugs, or emotional stress, and in any given individual depends upon the existence of undeployed affect of extreme intensity, or upon the existence of a disposition to act in the given way which is normally restrained by the dominant character pattern. Thus the cases of anti-social or anti-moral conduct cited by Salter take their place with other well-known phenomena. It is a matter of regret that Salter, repeatedly claiming the possibility of the hypnotic induction of immoral behaviour, does not attempt to account for the prepotency of the engrafted conditionings nor considers the implications of the pre-existing mores, even regarded only as pre-existing conditionings opposed to the immoral stimuli being applied. The formula relating hypnosis and unethical conduct might be re-stated thus: the ease with which a given subject may be induced to transgress his own moral code varies inversely with the tenacity with which he holds that code, and directly with the ease of disintegration of the psychic hierarchy.

Interposed between the partial reaction and fully integrated behaviour (personality reaction in Kretschmer's (5) terminology) lies a field of experience and response which may be termed the phanto-affective reaction. This level of integration is little influenced by logic, rational considerations, or empirical formulae derived from the testing of reality in experience. Ethical considerations also apply with less than their accustomed clarity, and are often, more or less completely, replaced by their ontogenetic precursors, namely precepts deriving from earlier experience. This particular zone of psychic experience and reaction is accessible to all; to some almost at will, and to others in states of emotion. Prejudice, desire, fear, affection and irrational, complex-determined sentiments and attitudes dominate experience and perception; behaviour is complex, sustained and goal directed. This is the source of most emotionally determined behaviour commonly met with in ordinary living, and most routine psychotherapy has its most effective impact on the subject here. Hypnosis, whether analytical or suggestive, mainly operates at this level, for hypnosis to the point of hallucinosis is quite unnecessary for the vast majority of cases. In the phanto-affective reaction affect is, in one guise or another, dominant, and human relationships are formed with much greater facility than when the fully developed, critical, rational, cognitive processes interpose their barriers between experience and the emotionally toned response which usually carries with it the sense of subjective reality, and immediate acceptability or unacceptability of the experience.

Hypnosis, in the traditional sense, then, may be regarded as a form of experience in which the critico-rational levels of the pysche of the subject are abrogated, and in which the subject enters into a relationship with the hypnotist whereby the hypnotist exploits the affective determinants of the subject and uses these as the mordants of the attitudes and reactions, etc., it is proposed to introduce. This means that affect is the mordant for the conditioning it is proposed to engraft.

Hypnosis can occur only over a limited range of the psyche, namely, in Kretschmer's (5) terminology, from the catathymic-partial reaction up to, but excluding, the personality-reaction, including, however, the phanto-affective reaction level. Between a conditioned reflex and hypnosis lies the whole non-rational structure and organization of the psyche. The technique of inducing hypnosis is the technique of evoking non-rational factors and allaying with their attendant anxieties the rational-critical factors in the psyche. Classically the latter is brought about by reducing extraneous stimuli and by presenting awareness with a monotonous stimulus, pleasantly toned, relating to the body image, and to attitudes connected with it. In this context Salter's " feed-back " technique is seen to be apt. By thus depriving awareness of substance for critical thought those features of consciousness associated with critical thought are no longer evoked, and so awareness becomes more even, and also more limited to the stimulus and response at a non-rational level.

Salter claims (p. 25) that trance is unimportant, yet in his description of tech-

niques he refers to it as a key criterion in autohypnosis (pp. 66–67). Indeed, in technique 3 of autohypnosis he claims to have explained trance away, whereas he has illuminated its quality. All the similarities quoted by Salter (pp. 25–26) between the trance and the waking state are physiological phemonena, yet trance differs from normal waking consciousness in the same subject, and from sleep—

(*a*) In muscle tone, and spontaneity of movement.

(*b*) In the withdrawal of attention from the background of the situation.

(*c*) In the more or less marked inhibition of sensory awareness with regard to one or more sense organs.

(*d*) With regard to the reduced inhibition of affective reaction, particularly when emotional stress exists.

(*e*) With regard to the greater facility for recall (particularly of affectively charged material).

(*f*) In the more or less marked abrogation of a rational, critical attitude to the situation involving the subject and the hypnotist, i.e., an alteration in the approach to reality.

Essentially one or more of these characteristics may occur in what is called normal consciousness, but as Salter's technique 3 of autohypnosis indicates, when all are present together trance ensues, and ordinary consciousness with its pattern of focal awareness and background of roving attention is abrogated. From what has been said earlier it will be clear that what is identical in trance and wakefulness is the non-rational integrated psyche. It would be remiss to conclude the discussion of Salter's views on hypnosis without making clear the writer's appreciation of his contribution to the field of hypnosis. Salter has drawn attention to some of the physiological roots of hypnosis, and has finally, one hopes, blown away the last cobwebs of magic which lingered about the field even in scientific and medical minds. This vigorous monograph is stimulating and provocative, and serves admirably as a statement on hypnosis from a behaviourist point of view. The present article, deriving from clinical experience, necessarily embraces a wider approach to the complexities of human behaviour than is compatible with the abstraction of behaviourism (so clearly formularized by Polanyi (7)) adequate as these may be for laboratory experiments of certain types. Having thus exposed some of the physiological roots of hypnosis, Salter has cleared the ground for a fresh clinical approach to its therapeutic and technical aspects, an essay in which has here been attempted.

Summary and Conclusions.

(1) In hypnotic phenomena there are several factors involved.

(2) The suggestions (conditionings) presented to the subject may be in the form selected by the hypnotist (or conditioner), or may be modified in the light of the patient's evidence regarding effective portions of the suggestive (conditioning) sequence (the feed-back method).

(3) These conditionings become effective in proportion to the degree of acceptance and conviction and belief of the subject in the actual situation.

(4) Affect is required for this transmutation from an intellectually received idea into a factor in behaviour operating more or less autonomously.

(5) Disturbances in the affective factor may influence the available skill or acquirements in hypnotic practice of the subject.

(6) The relationship between the patient and the therapist, either *per se* or as an exponent of a semi-magical procedure, may in certain circumstances appear as one of more or less marked submission, the more marked the more the integration (at a personal and social level) of the subject is disturbed, and the more secondary gain is derived from symptoms.

(7) In autohypnotic phenomena and practice the subject is led to arrogate to himself (often via a good deal of reassurance) the authority previously resident in the hypnotist or his skill (introjection).

(8) Hypnosis is conditioning, but conditioning involving factors of affective response and covert relationships not made clear by Salter, who worked mainly with material which was unfavourable to the revelation of these factors.

(9) The difference between a conditioned reflex and an hypnotically engrafted conditioned response is the whole non-rational integration of the psyche.

(10) Hypnosis can occur over a specific range of psychic integration, namely from the level (in Kretschmerian terminology) of catathymic-partial reactions up to, but excluding the level of full personality reactions. Conditioned reflexes occur at a level of the psyche below this, namely the levels of sensorimotor response (whether central or autonomic) and instinctual response.

(11) Clinical evidence challenges Salter's view that the role of the hypnotist is irrelevant in hypnosis.

(12) Salter's views on the question of hypnosis and unethical conduct are inadequate and a fuller formula is proposed.

(13) Four case-histories are presented illustrating—

(*a*) The problems of the inter-relationships of organic and psychogenic factors.

(*b*) The relationships of patient and therapist.

(*c*) The influence of affect on autohypnotic skill.

(*d*) The significance of " prestige " and " authority " in some form or another in the hypnotic situation.

I wish to record here my thanks and indebtedness to Dr. E. B. Strauss who first suggested this study in regard to Case 1, and referred Case 3 for experimental treatment. His interest in the cases and constructive criticism have been of the greatest help.

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