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Shell Shock in France
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Based on a War Diary
kept by

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was re-admitted to hospital, suffering from complete 'functional' paraplegia.

6. An officer, subjected to recent heavy firing, sleeplessness and anxiety, and having experienced a previous 'nervous breakdown', was near a bursting shell, although he was not knocked over by it. He lost control of himself, alternately laughing and crying. He tried to 'pull himself together', but found that it was impossible to 'carry on'. He lost confidence and often forgot orders that he had given or received. He could not concentrate his attention for long. He became abnormally irritable, and began to suspect his brother officers of talking about him. Finally his colonel sent him down. On arrival at the Base, he was found to be very depressed, with loss of flesh, appetite and sleep, and with a complexion of clay colour. Tremulous tongue. Reflexes normal. No nystagmus. Well-marked hippus and pseudo-Rombergism. Pulse 72, regular. Tremulous hands, when outstretched. He made a slow recovery with repeated relapses, until he admitted that he was worried by certain dreams and inexplicable ideas which were ultimately traced to a long forgotten emotional experience. With explanation, encouragement, and suggestion, however, he began to improve and was ultimately able to resume administrative duties, which he can do well so long as he does not allow himself to worry.

Chapter III

THE TREATMENT AND PSYCHOPATHOLOGY OF 'SHELL SHOCK'

TREATMENT

THE disposal of those cases which show signs of severe concussion, of severe neurasthenia, or of persistent mental derangement, in addition to the 'functional' results of 'shell shock', scarcely raises difficulty. Unless the concussion or mental derangement is transient, or unless the neurasthenic symptoms are slight, a considerable period of rest and treatment is essential, and the patient should be evacuated at once to the Base and, if necessary, thence to the wards of a 'special' hospital in Great Britain.

There is, however, far less unanimity of opinion in regard to the immediate treatment of the hysteric and cognate 'mental' disorders of 'shell shock', unaccompanied by serious concussion or neurasthenia or by obstinate mental derangement. Extremists in one direction would urge that such symptoms are so closely akin to malingering that they demand the adoption of the strictest disciplinary measures. Or, believing

that the more attention is paid to such patients the worse they will become, they advocate at least a studied neglect of them. Extremists in the opposite direction would subject them to a prolonged course of psycho-analysis, or would tend indiscriminately to pamper them.

The truth, of course, lies within these extreme attitudes. Although *pure* malingering, unaccompanied by mental disturbance, is rare, nevertheless, in certain cases of 'shell shock', and at certain stages of recovery, disciplinary action is of the greatest value, whereas in others the use of harshness or the suspicion that the patient is considered a malingerer serves only to intensify his symptoms or to provoke fresh ones. Each case must be treated on its own merits. In some, recovery can be induced by the policy of making light of the patient's condition. But the indiscriminate adoption of a policy of neglect is comparable to the dangerous inference that because certain cases, say of appendicitis, recover without surgical interference, no cases should therefore be submitted to operation. Indeed, there can be little doubt that, if left to themselves, the majority of 'shell shock' cases gradually become worse (or at least their recovery is retarded), owing to the fixation of their attention on their present condition and on their past experiences.

The successful immediate treatment of such cases of 'shell shock' essentially consists in

(*a*) promptness of action, (*b*) suitable environment, and (*c*) psycho-therapeutic measures.

Promptness of action. Where by the use of moral suasion, in which he should have been trained, the Regimental Medical Officer is unable to effect a cure at his Aid Post (this is often possible, even sometimes in apparently severe shock), the patient should be immediately evacuated direct to a receiving 'centre' within the Army Area for cases of 'shell shock', under the care there of experienced Medical Officers. There can be no question that this is the proper procedure, having regard to (i) the contagiousness of the affection within a unit, if 'shell shock' became recognized as an easy means of escape to the Base, (ii) the difficulty of determining to what extent the apparent mental disturbance is due to no fault of the soldier, (iii) the undoubted fact that the disorder is very apt to become 'systematized', and hence more difficult to cure, by the postponement or the neglect of treatment which must inevitably arise if such cases are admitted through the usual channels of the general medical wards of Casualty Clearing, Stationary or General Hospitals, where they will be attended by Medical Officers who have not the requisite experience, interest or leisure to treat the affection properly.

Suitable environment. The receiving 'centre' to which cases of 'shell shock' that require systematic treatment are first sent should be as remote

from the scenes of warfare as is compatible with the preservation of the mental 'atmosphere' of the Front. It must therefore be neither within easy range of bombardment, nor at a Base whence cases are being frequently transferred to the United Kingdom. Tents are suitable for the majority of these patients. But separate accommodation is needed (i) for cases presenting or developing such serious symptoms as demand evacuation to the Base, and (ii) for cases which are under suspicion of malingering, including those which are deemed to require disciplinary measures, such as rigid isolation, restriction of diet, etc., evoking the successive stages of indifference, resentment, and endeavour. It should be possible to apply still severer discomfort to cases of persistent exaggeration or simulation, until they yield or, after being detected *in flagrante delicto*, are sent away for punishment.

A private room or tent is essential for the use of each Medical Officer, where he can examine cases individually and confidentially, and give them the treatment suited to their condition.

Mutatis mutandis, the above recommendations are also applicable to the special hospitals or 'neurological' sections at the Base and in the United Kingdom.

A trained neurologist is by no means necessarily the most successful physician for these cases. Valuable as is such previous training for the

elimination of the rare organic cases which are erroneously diagnosed as 'shell shock', and still more valuable as is an adequate previous training in psycho-pathology and psycho-therapy, what is even more important is that the Medical Officer should possess enthusiasm, confidence, cheerfulness and tact, with wide knowledge of the failings of his fellows and an ability promptly to determine whether a policy of persuasion, analysis, intimacy, sternness or reprimand should be adopted. Only the experience of such a man can lead to the successful treatment of individual patients, the detection of the (partial or pure) malingerer and the avoidance of injustice to genuine cases; and even he will occasionally fail. The number of cases under the charge of a single Medical Officer should not exceed seventy-five.

Nursing Sisters are of the greatest value, their personality, like that of the Medical Officers, being of paramount importance.

With the adoption of these measures and of systematic treatment, every advantage will be found to attend the segregation of 'shell shock' cases. If, however, they are herded together and left to themselves, they are almost sure to go from bad to worse.

Psycho-therapeutic treatment. Between wilful cowardice, contributory negligence (i.e. want of effort against loss of self-control), and total irresponsibility for the results of the shock, every

stage conditioning 'shell shock' may be found. Many cases, especially those complicated by mild neurasthenia, will be found to benefit by a few days' initial rest in bed, with careful attention to sleep, diet and evacuation of the bowels. The danger, however, must not be overlooked of leaving a patient to brood in solitude over his worries and symptoms which are thus apt to become stabilized.

The psycho-therapeutic measures adopted may be conveniently classified, according to the stage of their application, as (i) restorative, (ii) convalescent.

(i) *Restorative*. Nothing can be attempted in psycho-therapy until the attention, interest and confidence of the patient are obtained. Any attempt to treat a patient during maniacal excitement, active hallucination or unyielding apathy or stupor, save by medicinal measures, is a sheer waste of time. Recovery from a condition of mild mental confusion may be often assisted by tactful persuasion; but severe stupor may be regarded as naturally imposed in order to safeguard the patient temporarily from communication with the outer world. The result of an 'emotional trauma', it cannot be regarded as falling within the 'anxiety neuroses' or the 'conversion hysterias'.

With perseverance the persistent apathetic attitude of many patients will be found to disappear;

it often connotes some congenital weakness of intellect. With tactful management states of apparent stubbornness will also pass away; they usually betoken previous mental confusion and a tendency to revert thereto.

The guiding principles of psycho-therapeutic treatment should consist in the re-education of the patient so as to restore his self-knowledge, self-confidence and self-control. For these a judicious admixture of explanation, persuasion, and sometimes scolding, is required, as in the education of children, and, where necessary, as in amnesic cases, in the restoration of a completely normal, from a dissociated, personality.

In the milder cases of 'shell shock', unaccompanied by serious loss of memory or by severe sensory or motor troubles, the emotional disturbance may often be quickly quieted by an intimate talk, the patient being encouraged to 'confess' all his fears and worries, and induced to regard them as normal experiences in the circumstances. Care should be taken to explain to him that any mild delusions, hallucinations or other unusual mental states of which he may complain are harmless and transitory, and that they will soon disappear without danger to his future sanity. The anxiety of a patient that he will be sent to a 'lunatic asylum', or returned to the Front before he feels fit for duty there, must be suitably allayed if a speedy cure is sought. It

should be the physician's ultimate aim to convince the patient that he is fit for duty; and he should not return him to it until this assurance is obtained.

The mental life of a soldier is often so simple that the cause of his emotional disturbance is at once apparent. But in some cases the real cause of the patient's condition is unknown to him; and then recourse must be had to the analysis and elucidation of previous conflicts or of the dreams or strange ideas which force themselves on his notice, and to the revival of forgotten memories, if necessary under slight hypnosis. Such analysis and revival, especially where the patient is unable or unwilling himself to make the effort of successful revival, are enormously facilitated in the hypnotic state; and inasmuch as patients suffering from 'shell shock' are extremely easy to hypnotize (no doubt the effect of the shock upon their 'personality'), the Medical Officer should make appropriate use of this valuable aid in a small proportion of the cases under his charge.

The stage of hypnosis needed for the exploration of unconscious repression or dissociation is easily reached by narrowing the patient's attention and then by suggesting to him first that he is beginning to feel more and more sleepy and ultimately that he cannot open his eyes. All that is necessary is to obtain his consent to this method of cure, to get him to fix his eyes on the physician's

upheld finger, and after a few seconds to persuade him to admit that his eyelids are feeling a little heavy, then that he is feeling increasingly drowsy, and finally (and peremptorily) that his eyelids are now so heavy that he cannot raise them when he now tries to do so. It is a perfectly safe and reliable procedure to adopt, provided that it be only employed for psycho-therapeutic purposes, in particular for mental re-integration or re-synthesis of dissociated or repressed memories, and not merely for the removal of bodily 'functional' disorders by suggestion. But some initial courage is needed to overcome a certain natural prejudice against its use, the first trial of it demanding more self-mastery than the first sight of a surgical operation.

Hypnosis will succeed in such cases where many weeks of psycho-analytic 'free association' and 'conversation' in the waking state may fail. The forgotten memories may relate to recent war experiences or to long previous conflicts which (by no means in all cases) it may be thought wise to revive for therapeutic purposes. Their revival, even under hypnosis, will usually need great persuasive effort on the part of the physician in order to overcome the strength of repression (or inhibition), and may be attended with so much emotion that the patient prefers to wake from the hypnotic state rather than to attempt or continue to recall them. It is a mistake to suppose that the

emotions relating to the forgotten memories must necessarily be revived in their original strength with the recall of those memories, in order to effect a cure. The patient should therefore be enjoined, when in a state of light hypnosis, that he will now be able to face the forgotten situation without undue emotion. This procedure is almost invariably successful in bringing to light the 'buried complexes', if the persuasion be strong enough. He should also be told that on waking he will be able to remember all of (or even more than) that which he has just recalled, without fear or horror. He is then ordered to wake, and is thereupon asked immediately to give once again an account of his previously forgotten memories.

Similar strong suggestion and persuasion, without (or occasionally with) the use of hypnosis, will be found to cure also many cases of mutism, aphonia, paralysis, spasmodic movement, anaesthesia, hyperaesthesia, as well as the less resistant cases of amnesia. Such exciting stimuli as ether or chloroform (in the early stages of anaesthesia) or the electrical current (applied to the affected part) are of the greatest value in long-standing and obstinate cases, where the condition has become almost a 'habit'. But sometimes, especially when forcible means are employed under an anaesthetic, violent 'hysteric' excitement is displayed before a cure can be effected. As in the

permissible use of hypnotic drugs in cases of 'habitual' insomnia, such methods must be regarded as mere adjuvants or accessories to analyses and explanations and to simultaneously given suggestions of recovery. Otherwise the rough-and-ready application of a second shock (or excitement) to cure a previous 'shock' is apt to convert mutism into stuttering, or to effect only an apparent cure followed by the development of some other 'functional' disturbance. The onset of fear at the application of such stimuli, or the slightest suspicion of 'torture', at all events in early cases, and in the absence of an anaesthetic, must be most carefully avoided; the infliction of pain is only justifiable in cases of long-standing neglect or of suspected malingering. In its early stages mutism is often a relic of previous stupor and is apt to revert to that condition.

In a very small proportion of cases Jung's 'word-association' method will prove useful in putting the physician on the lines of discovery of repressed 'complexes'. But prolonged psycho-analysis along Freudian lines is only possible in cases evacuated to the United Kingdom and is only advisable in the most obviously psycho-pathic patients: the 'sexual' origin of the vast majority of 'shell shock' cases is more than doubtful.

Functional deafness usually disappears rapidly. In obstinate cases of functional deafness, lip-

reading will be found easy to teach; and this provides a useful means of convincing the patient that he can really hear, as the Medical Officer addressing him gradually assumes a position where he cannot be seen while conversing.

Functional blindness and blepharospasm usually disappear if counter-irritation be applied to the temples and the patient be instructed to plunge his head several times daily, with eyes open, into cold water. It is as well also to correct any error of refraction if present and if possible.

But it may be necessary to trace any of these functional disorders to their emotional origin, restoring the dissociated memories to consciousness or tracing, reviving and explaining any suggestion, e.g. an intense flash of light, which may have originally provoked the disorder.

Contractures may be reduced under an anaesthetic, but they are apt to recur on the return of consciousness. Again, the physician must be warned that it is generally useless, save in long-protracted cases, to cure such physical signs until the mental disturbance underlying them has been treated. It is dangerous under an anaesthetic to fix a limb, previously in a state of contracture, in a plaster jacket, unless adequate suggestions have been made that on removal of the jacket the limb will regain its normal mobility.

Severe headache, when associated with raised pressure of the cerebro-spinal fluid following

burial by a shell, may be alleviated by lumbar puncture.

Few patients are more delighted with their recovery than those who have been successfully treated for genuine 'shell shock'. The atmosphere of unfeigned optimism which should greet the newly arrived patient cannot fail to help enormously towards his speedy recovery. It is for this reason that intractable cases and those of possible malingering should be segregated from the rest.

(ii) *Convalescent.* The process of re-education in the direction of a regain of self-confidence and of ultimate return to duty must be still further pressed when the patient has passed the stage of clinical psycho-therapeutic treatment. As soon as possible, every patient should be restored to an atmosphere of increasing military discipline, gradually passing from gentle strolls and the mildest forms of exercise to longer marches and more strenuous physical drill and 'fatigues'. Such patients need to remain under the eye of the Medical Officer who has obtained their confidence from the outset, until they are ready for some form of duty. The undue neglect or pampering which they receive from inexpert hands only invites a relapse. If allowed to drift alternately between hospital and duty, in a half-cured, unstable state, these patients are apt to enter a long and costly vicious circle of recurrent mental

disorder which may sometimes, among those prone thereto, eventually assume a condition of certifiable insanity.

Hence, at the convalescent stage, 'shell shock' cases should, as far as possible, be still treated in the hospital where they have been cured. In the convalescent wards each patient should be subject to a daily time-table, definite hours being allotted to amusement, 'fatigues', reading or writing, physical drill, rest, exercise, and (if necessary) special treatment. He should have ready access to the Medical Officer in case of further worry or anxiety. This is less likely to occur if the patient is fully occupied in the process of convalescence than if he be allowed to spend most of his day moping and wandering aimlessly about. His every action must be at first prescribed for him, as he is gradually coaxed and scolded, without worry, back into some form of full military discipline.

PROGNOSIS

The prognosis in cases of 'shell shock' is generally good, the speed of the patient's progress depending mainly on the severity of the shock, the absence of congenital or acquired mental instability or of past psycho-neurosis, freedom from anxiety, and appropriate treatment.

The severest cases are generally the minority that have been buried or lifted by a shell; many

of these prove extremely resistant to treatment. Indeed, in rare instances it is difficult to resist the conclusion that structural damage has been caused, similar to but less pronounced than that found in the few fatal cases of burial or lifting which have been examined *post-mortem*. The occurrence of minute haemorrhages, or of lesions of a still more microscopic character, in the cortical or subcortical cerebral regions, the basal ganglia, etc., may well retard recovery from the ensuing 'functional' disorders.

It is especially among those who have most obviously succumbed to horror, fright or worry that the mental condition affords the safest ground for prognosis. As a rule, there is little correspondence between the severity or duration of the 'higher' mental symptoms and the severity or duration of the sensory, motor or other bodily symptoms (loss or increase of sensibility, palsy, contracture, ataxia, etc.). *Ceteris paribus*, those who have sustained the least emotional shock make the quickest recovery; the shock is apt especially to affect the exceptionally young, and in them to cause the gravest disturbance of the personality.

A good mental constitution, free from previous mental 'trauma', is the surest passport to a speedy and permanent recovery.

It need hardly be said that the patient's freedom from anxiety (of unknown cause or relating,

e.g. to his recent war experiences, domestic troubles, return to the firing line, or doubts as to the future of his own sanity) is an essential condition for his unretarded progress, and that any such anxieties, if detected, must be at once traced to their cause and allayed in repeated private interviews.

Relapses are not infrequent during recovery, owing to passing worry, fresh emotional shock, and especially to the lack of a suitable confidant. It is the common experience of Regimental Medical Officers that a man who has twice broken down under shell fire is useless at the Front thereafter.

The essentials of treatment consist, as has been already indicated, in psycho-therapeutic measures which should be applied with the least possible delay by Medical Officers of experience; and patients should remain under their care, so far as possible, until they are fit for duty. In a word, treatment should be directed to the recovery of memory, self-knowledge, self-confidence, and self-control, i.e. to the recovery of the normal self. Then we should hear less of those later attacks of fear, accompanied by palpitation and shortness of breath, those moods of depression during which the convalescent wonders whether life is worth living, the night terrors, the shakiness and dizziness by day (especially provoked by exercise, excitement or during noise), those pranks of

memory, those worries over unrecallable incidents, and other common relics of 'shell shock' which are too often the outcome of delayed, neglected or erroneous treatment.

PSYCHO-PATHOLOGY

We are now ready to take a more general view of genuine 'shell shock'. The first striking feature is that, whether any accompanying brain lesions be relatively gross (e.g. minute haemorrhages), microscopic (e.g. chromatolytic changes), or ultra-microscopic; whether they be entirely absent; whether or not the ensuing symptoms be in part determined or maintained by toxic influences (due, e.g., to disordered internal secretion—itself the outcome of a sympathetic or other neurosis after the shock)—'shell shock' must be regarded as essentially an emotional 'trauma'. One day, perhaps, the nature of the parallel *neural* trauma may be clear to us. But in our ignorance we can at present only describe and discuss 'shell shock' in psychological terms.

We are next struck by the great diversity of disturbance which may result from such a 'trauma', and by the different causes, origins and degrees of the 'trauma' itself. It may be difficult or impossible to draw a definite line between sudden and gradual 'trauma', and between the cases presenting neurasthenic, hysteric and other temporarily 'mental' disorders. Either they shade

insensibly one into the other, or they complicate one another inextricably. Indeed, the sole function which the term 'shell shock' appears to serve is to embrace under one name these disorders, of such diverse nature, arising from the emotional stress of warfare.

Typically the immediate result of the 'trauma' is a certain loss of consciousness. But this may vary from a slight, momentary, almost imperceptible dizziness or 'clouding' to profound and lasting unconsciousness. When the 'shock' is slight, the patient may be able to 'pull himself together', or he may be readily amenable to outside suggestion to this end. When the 'shock' is severe, it may be followed by unrestrainable excitement, depression, fugal automatism, or stupor, on recovery from the graver forms of which the patient can recall none of the acts performed by him during that condition. We have no means of deciding whether in the most deeply stuporose states mental processes are completely dormant. But in the states of lighter stupor and in the states of excitement, depression and automatism just mentioned, the attention of the patient would appear to be concentrated on some narrow field, doubtless generally on the scene which produced his condition. While thus occupied, the stuporose patient lies in a more or less apathetic state, with occasional outbursts of hallucinatory delirium. At this stage, then, the

normal personality is in abeyance. Even if it is capable of receiving impressions, it shows no signs of responding to them. The recent emotional experiences of the individual have the upper hand and determine his conduct: the normal has been replaced by what we may call the 'emotional' personality.

Gradually or suddenly an 'apparently normal' personality usually returns—normal save for the lack of all memory of events directly connected with the shock, normal save for the manifestation of other ('somatic') hysteric disorders indicative of mental dissociation. Now and again there occur alternations of the 'emotional' and the 'apparently normal' personalities, the return of the former being often heralded by severe headache, dizziness or by a hysteric convulsion. On its return, the 'apparently normal' personality may recall, as in a dream, the distressing experiences revived during the temporary intrusion of the 'emotional' personality. The 'emotional' personality may also return during sleep, the 'functional' disorders of mutism, paralysis, contracture, etc., being then usually in abeyance. On waking, however, the 'apparently normal' personality may have no recollection of the dream state and will at once resume his mutism, paralysis, etc.

The dissociated 'emotional' personality is thus ever ready to appear on the scene, although its

opportunities become fewer in the course of time. The relation of the functional 'somatic' disorders (paralysis, spasmodic movements, anaesthesia, etc.) to the experiences suffered by the 'emotional' personality is by no means clear. They would appear to be the outward expression of this dissociated personality with its highly emotional 'complex', as it works 'subconsciously' through and beneath the 'apparently normal' personality.

The physician's aim should be to restore by suggestion (aided, if necessary, by hypnosis) the experiences of the 'emotional' personality in a chastened, controlled condition, able to be 'faced', integrated with, and thus restoring, the normal personality. He should attribute the 'functional' symptoms presented by the 'apparently normal' personality to the shock which has divorced from it certain experiences represented in the 'emotional' personality. In other words, the effect of such dissociation and repression should not be regarded as confined merely to the realm of memory, but as also involving motor and sensory loss of control and even reflex disturbances, the functional 'somatic' symptoms forming part (or being an expression) of the 'psychical' dissociation which has produced the 'apparently normal' personality.

Accordingly, the treatment to be recommended—which is particularly important and

easy in early cases seen in France—consists in restoring the 'emotional' personality deprived of its pathological, distracted, uncontrolled character, and in effecting its union with the 'apparently normal' personality hitherto ignorant of the emotional experiences in question. When this re-integration has taken place, it becomes immediately obvious that the 'apparently normal' personality differed widely in physical appearance and behaviour, as well as mentally, from the completely normal personality thus at last obtained. Headaches and dreams disappear; the circulatory and digestive symptoms become normal; even the reflexes may change; and all hysteric symptoms are banished.

Sometimes, however, owing to perseveration* or to obscure causes (e.g. previous emotional 'traumata'), the functional somatic symptoms persist after the individual appears to have regained full memory and control over the forgotten experiences of his mental shock. Under these conditions, and also as a result of the want of correspondence between the severity of the somatic and psychical disturbance, it is often possible, in accordance with the practice of the 'pure' neurologist, to remove the functional disorder (e.g. to restore movement by electricity or by an anaesthetic) without reference to any dis-

* By perseveration is meant the persistence or repetition of any mental state or movement.

sociated, repressed mental experiences. But so long as the latter are not restored to the individual's memory, his mental health must be regarded as in highly unstable equilibrium, at least for some considerable time.

Nature's purpose in repressing the patient's painful experiences is obvious. They demand temporary relief like any painful region or overworked organ of the body; but protracted rest and immobility are inconsistent with a return to complete health, and any undue spoiling at the hands of Nature must be avoided.

The character of the 'somatic' disorder is determined sometimes by past experiences (e.g. previous accidents, inflammations, pains, or other disorders of movement or sensation), and sometimes by the physical conditions attending the shock (e.g. a blow on the leg by falling timber, a blaze of light across the eyes, an intolerably intense sound, etc.). Some 'somatic' disorders are due to unconscious suggestion; some may even arise from conscious suggestion, extreme suggestibility being one of the slighter disturbances in personality which may be produced by the shock. But in many cases no trace of suggestion or other such cause can be found. There remains the likelihood that certain disorders (e.g. many cases of mutism) are a survival of the stuporose or confused state into which the patient had initially fallen, and that others (e.g. certain

continued gestures) are the persistent expression of the emotion which has produced his condition.

The part played by 'suggestion' is by no means clear. In the pre-war period, the hysteric was believed to suffer from a 'self-suggested idea' of paralysis, contracture, hyperaesthesia, anaesthesia or the like, and it was laid down that the signs and symptoms of hysteria must therefore be such that they can be alternatively produced by the will. But we have no evidence of the universal presence of such ideas; nor do we any longer believe that the idea of a movement must be consciously present for that movement to be performed by the will. 'Functional' nervous disorders are assignable, not to deranged volition, but to a dissociated personality and its results.

Moreover, some of the 'functional' muscular disorders observed among the war neuroses (including cases that develop after wounds or fractures, which do not strictly fall under the rubric 'shell shock') are accompanied by abolition, exaggeration, or even apparent reversal, of the limb reflexes and by loss of muscular tone and excitability, often confined to the afflicted side, by local loss of warmth (hypothermia), increased sweating (hyperidrosis), atrophic changes in the nails, bones, etc. Most of these phenomena seldom occur in the absence of contracture or paralysis, and are of late development. They may appear when the contracted or paralysed limb has

received only a trivial wound or even when it has received no wound at all. It has been found that many of these phenomena can be abolished by warming the affected limb and that chloroform anaesthesia often produces an exaggeration of the reflexes and of clonus on the side affected.

It is impossible to imagine that these signs of apparently reflex origin can be produced volitionally. Consequently the associated contractures or paralyses of the limbs in such cases have been themselves ascribed (first by the distinguished French neurologist, Babinski) to reflex causes; and such cases have been discharged by him and others, uncured and with pensions, from the French Army, whereas they—and the accompanying reflex signs—could have been successfully cured, in my experience, by appropriate psycho-therapeutic measures, aided sometimes by manipulation.* Moreover, the position of the limb in obviously 'functional' contractures is not necessarily one that can be reproduced by the will, nor are the dys-synergic phenomena, persistent vomiting, or tympanites observed in some cases of 'functional' disorder similarly reproducible.

If, then, 'suggestion' plays—as it undoubtedly does—a part in 'functional' nervous disorders, its influences (as we know well from the vaso-motor

* A further discussion on these 'reflex' cases will be found in my contribution to the *Lancet* of 11 January 1919.

changes producible by hypnotic suggestion) are not limited to the voluntary nervous system. Nor is it easy to understand how, through the influence of mere suggestion, long-persisting deafness, contractures or spasmodic movements can, as they sometimes do, continue during sleep; nor how, when they cease during sleep and reappear thereafter, a fresh suggestion can be given each time on waking. It is clear, therefore, that the previously employed notion of 'suggestion' is inadequate: the concept of 'dissociation' is far more important, more profound and far-reaching. The reappearance of 'functional' symptoms on waking from sleep is due not to the renewal of suggestion but to a revival of the disordered personality and of inherent dissociated emotional expressions.

Equally insufficient is the Freudian concept of a 'conflict' of incompatible behaviour involved, say, between the acquired sentiment or 'wish' to do one's duty (or between the 'censor') and the instinctive, emotional, impulse or 'wish' to escape from a dangerous situation. Repressed 'wishes', and their outlets in bodily, sometimes symbolic, action or inaction, cannot account for more than a part of the phenomena—especially late phenomena—occurring in the psycho-neuroses of war. Conflict is not an invariable cause of these phenomena; a severe emotional 'trauma' may suffice. I recall the admittedly unique case of a

soldier, pre-war a University student in Wales and already twice wounded, who, after a shell had burst behind the parapet of his trench one morning, immediately lost his speech and hearing. Failing to communicate with his corporal by gesticulation, he wrote down that he wished to be allowed, despite his condition, to 'go over the top' in the attack which his unit was to make that afternoon. The corporal obtained his Company Officer's permission for this man to do so. Mute and deaf, he went through the attack satisfactorily with his Lewis gun, but received a small shrapnel wound in the leg when the order to retire was given. By his sergeant's orders, as his leg was still bleeding when he returned to his trench, he reported to the Dressing Station whence he was sent down to a Casualty Clearing Station. All this information was confirmed in a note received by me later from the Medical Officer of the man's unit. I saw the patient eleven days afterwards when he was still mute and very deaf. In the course of our conversation, conducted in writing, he remarked: "I feel quite fit physically... I've been too long up there to look on it with any fear." Having failed to restore his speech or hearing by written persuasion, I administered an anaesthetic (ether) which he took quite quietly. It was not until he had been physically stimulated that, after exhibiting extreme excitement and violence, he

could be induced to speak. On 'coming round' his first act was to seek my hand and to grasp it in gratitude: his whole appearance betokened genuine pleasure. Later he asked me if there were any danger of a relapse.

The following scheme accordingly defines the broad and fundamental position we have thus reached as regards the psycho-pathology of 'shell shock':

(*a*) emotional 'trauma',
  (i) conscious, due to extreme fright, horror or other intolerable distress,
  (ii) unconscious, after physical violence,

producing

(*b*) mental 'shock', varying from slight dizziness or 'cloudiness' to profound stupor,

leading to

(*c*) disordered personality, characterized by amnesia, fission of personality, suggestibility, etc.,

accompanied perhaps by

(*d*) hysteric ('functional') symptoms, and/or by neurasthenic ('exhaustion') symptoms, in the emotional, cognitive, volitional and autonomic systems.