PSYCHOLOGY AND THE PRACTICE OF MEDICINE.*

BY

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I HAVE chosen the subject "Psychology and the practice of medicine" with the intent to show that the medical practitioner is faced every day with problems largely psychological in their nature, and that a greater knowledge of such problems is becoming more and more necessary to him if he is to preserve his place in an advancing world. I would ask you to look upon psychology as the study of personality. The psyche was in earlier days considered to be that part of the mind which was occupied with intellectual and emotional registration and expression, and there is no reason at the moment to dislodge it from that position. Personality grows and expresses itself through intellectual and emotional stimuli and reactions, which may arise from within or from without the person. Such stimuli and reactions are conveyed and expressed through the medium of agencies which we are accustomed to call somatic—such as the organs of special sense, the skin, the neuro-muscular and neuro-secretory systems, and the various nerve centres. The formation and expression of personality depend on a proper response to stimuli of large groups of cell communities more or less in touch with external influences, and also on processes generated and carried out entirely by the higher centres in the brain and their communicating fibres. Therefore, in the study of personality we are faced at once with the fact that a response to stimulation may be altered in some way by faults in any one of the transmitting or registering systems involved.

A stimulus may fail to register in the brain through a fault in the skin or in one of the more highly specialized sense organs. Again, a stimulus may reach the brain quickly but may fail to produce a reaction either on account of the incapacity of the higher centres to appreciate it, or because some fault in the efferent mechanism prevents its translation into appropriate action.

The normal effect of introducing a pin into the skin is to produce a sensation of pain. This sensation ought to have the effect of causing the person to remove the irritated part of his body from the pin. Again, if the skin of the face is slapped by an alien hand, the usual reaction is a local discomfort and flushing, and a rapid translation of the stimulus into violent muscular action of a retributive character. Here the stimulus has been more complex. The true personality has been attacked and an emotional response is induced, as well as a mere somatic sensation and reflex. Where intellectual power is weak the emotional response will occur with certainty; so that if you slap the face of a person of small intellectual and at least average emotional equipment, you may expect to be severely dealt with. In our comparatively civilized communities, however, such a "normal" reaction is inhibited by training and experience, and if the face of a really well-trained man were slapped in a drawing room, the usual neuro-muscular response would not occur. In all probability the emotional reaction would be registered externally by a generalized pallor, against which the local flushing would stand out strongly, by a clenching of the hands and a general rigidity, the result of the central effort to control that is part of the training of all civilized beings. This control of impulses for the good of a community is one of the most important features in psychology. In anything like completeness it is not inborn; it has to be developed. In personalities that have behind them a reasonable history of racial and familial civilization, the training and development are not very difficult; the response to instruction and to experience is rapid, and memories are readily formed which act as a check when the period of instruction is past. The development of control must be the result of an understanding that we are

responsible, in a community's life, not only for our own welfare but also for that of other people. No person's psychology is properly developed unless emotions, and their natural expressions, are controlled within safe social limits, and a sense of duty to other people is properly developed.

Human beings live in an environment that is continually changing, and it is impossible that all can develop adaptive qualities in the same degree. Sense stimuli grow more and more urgent—noise, hurry, the adaptation of the mind to newly invented things, all go to form an environment which is very trying to the psychological make-up of all of us. Some personalities respond to these stresses and changes with little apparent effort; some grow confused and dull; others are so sensitive to the ever-increasing stimuli that their responses seem to get beyond their capacity for control, and they become restless, excitable, and in the end exhausted. Even among those who apparently adapt themselves easily there are many whose capacity for control, although enough to cope with the stimuli of their ordinary life, gives out under strain that is abnormal to them, whether sudden or prolonged, emotional or intellectual.

The preservation of a just balance between emotion and intellect is a psychological necessity if a personality is to develop along the lines of greatest service to itself and to others. The uncontrolled emotional person is no more abnormal, and often not more disturbing to a community, than the cold and over-controlled intellectual who by nature or training appears to have developed a complete immunity to the attack of all emotions. The inhibition of natural emotional reactions can be carried to excess, especially if it is merely active in preventing an obvious response to a stimulus, and not also active in correcting the thought-response, so that the following reaction may be harmless, and even beneficial. The most obvious example of how the control of only external expressions may be of poor service to a personality is met with in the response to sex stimuli. If control is exercised merely to prevent a ready expression of the reaction, sooner or later the personality will develop abnormalities of reaction, especially if the control is induced by fear of personal consequences and not by a true sense of responsibility. On the other hand, if in response to sexual stimuli, control is exercised not only in the direction of repression but to convert the emotions aroused into higher forms of expression, the resulting reactions may be of the most elevating kind. Many of mankind's greatest achievements have been without doubt the result of the harnessing and translation of human passion. Control should be so developed that not only the repression, but the useful development of emotional reactions shall be the result.

Control is difficult to develop in certain instances for two reasons: through inborn faults it may be weak, so that it gives way under a very small strain; it may be considerable and yet be overcome by an excessive response to a specific stimulus. Many people give way through sheer weakness of control to ridiculously small stimuli; others, whose general control is at least up to the average, succumb to emotional appeals which to them are strong enough to be almost irresistible. In the latter class are to be found many of those who become alcoholic. Naturally hypersensitive and shy, regarding too much the opinion and power of others, they use alcohol to dull their sensitiveness, and to remove the principal barrier between themselves and those whom they wish to impress.

In medical practice by far the larger number of patients showing psychological weakness belong to this hypersensitive group, and it is the duty of the practitioner to try to discover how much of the psychological weakness is due to gross somatic causes before he tries to influence such a personality, whether by persuasion or by some more specialized form of psychological treatment. Chronic toxæmia, endocrine disturbance, combined with an inherent metabolic fault, may produce psychological aberrations so profound that the patient may appear to have crossed the border between sanity and insanity. In the treatment of such cases it is necessary to think at first along purely somatic lines. Only if no somatic disturbance is discovered, and organotherapy and drug treatment have failed, must the doctor turn to directly psychological methods

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of treatment. Somatic disorders, secretional, chemical, or toxic, have a profound influence on personality. This is not extraordinary when one realizes that all emotional and intellectual processes depend for their inception and development on a somatic mechanism, and if that mechanism is at fault on its nutritional, afferent, or efferent sides, the intellect and emotions will suffer. Phobias may be due to some psychological trauma, but among my own cases I have found in 70 per cent. a definite somatic fault which seemed to determine the occurrence of these fears, and with whose correction the fears disappeared. The sensation of fear is largely referred to the epigastrium, and accompanied by disturbed cardiac action, and observation has shown that these discomforts are associated with a dilatation of the gastric fundus. This type of gastric dilatation, with varying degrees of paroxysmal tachycardia, and epigastric and left hypochondriac uneasiness, was the somatic fault present in 70 per cent. of my cases of phobia, and it seems possible that the cardio-gastric phenomena associated with fear, if produced by other means, may suggest to the higher centres that the patient is afraid, with the result that he searches unconsciously for a cause, and unfounded fear of crowds, or open spaces, or personal failure ensues.

Children are not born with a highly developed faculty of control or sense of responsibility. They have to acquire our standards of right and wrong carefully, and in many cases with difficulty. A child is apt to put out his hand and take what he wants, having no regard for others, an instinct common to all primitive creatures. His instinctive reaction to fear is to lie, simply for self-protection. Only training and experience teach him that he must not take other people's property, and that lying is a social evil of some magnitude. In the majority of cases such instincts are corrected before the age of 12 or 14, but in a certain number of people a tendency to dishonesty and untruthfulness persists into young adult life, and may die only with the person. If parents and schoolmasters are honest enough to recognize that they themselves have had comparable difficulties, the cure of these tendencies is almost certain. The treatment must, however, be sympathetic and rational. Fear of immediate consequences is only a deterrent; hell-fire and flogging are merely repressive and not really educative agents. The dull or apparently irresponsible youngster may be cured by the correction of a physical defect, such as an error of refraction or an endocrine imbalance, but the fault may be beyond the reach of such treatment, and yield only to careful training combined with suitable employment. Irritable and inattentive children may settle down to steady work when introduced to a subject which interests them and for which they have an aptitude. Moreover, as they grow in knowledge along one line, they may develop capacity in quite different kinds of work. Co-ordination of the fingers by means of a dumb piano may contribute to the cure of a stammerer; so the development of methods of learning produced by the study of one subject will promote educational success in others.

Those of us who during the war were interested in the re-education of the disabled were astonished to find the psychological improvement that often followed on an entire change of occupation, and how well some ordinary journeymen developed when a chance was given them to become foremen, buyers, or even managers.

Experimental psychology must appeal strongly to all of us who admire the methods of Hunter. I do not think that John Hunter, had he been alive to-day, would have busied himself only with the chemistry of protoplasm or refused to liberate himself from the tyranny of the microscope. Rather do I think that his restless mind would have been much occupied in thinking ahead of proved facts while insisting on proving as much as possible. In psychology experiment is as necessary as in any other field of knowledge, and facts about reaction times, for example, are of the utmost importance in the study of personality. A good observer can separate people into classes by finding out if their reaction times and association rates are average, fast, or slow, thereby establishing whether the relations between the sense organs, the centres, and the neuro-muscular system are normal or not; afterwards, perhaps, he will be able to state with some degree of accuracy whether

the three systems are healthy, or where the failure has occurred. From the clinical point of view it is of interest to realize that, once such a classification is made, a capable medical man is able, by appropriate treatment, to raise many from lower to higher classes; but we must remember that to every individual is set a limit to his capacity for improvement, and that trying to improve the unimprovable is a waste of time. Practical psychology, with medical co-operation, could also be used for the grading of young people into classes suitable for different kinds of work, and much unhappiness and poor development, with their attendant train of sickness and incapacity, could be avoided, to the great financial betterment of this country.

To consider, however, that by the study of experimental psychology may be obtained the only means of recognizing and remedying psychological faults, would be as ridiculous as to decry its usefulness. There is still room for the thinker who, beyond his observations, can erect hypotheses on which good work can be done though experimental proof be still wanting. The metaphysician is as necessary as the physicist and the physiologist in the study of psychology. Facts without correlation, discoveries claimed as facts without adequate proof, experiments unchecked by reason, may be as useless and as dangerous as theories unsupported by facts. The way lies between the experimentalist and the speculative thinker. The usefulness of psychology to the medical man lies in his being bound neither to one wheel nor the other, but in his being carried by both to a practice equally useful to him and to those under his care.

There is need to-day for the sensible treatment as well as the differential diagnosis of psychological ailments. According to the diagnosis, so must be the treatment. It is futile to attempt to treat by psycho-analysis a disorder of personality due to an inherent endocrine weakness exaggerated by toxæmia of intestinal origin. Yet beyond the groups of psychoses of directly somatic origin, beyond the faults of character already indicated, there is a group or groups whose explanation is not so easy and whose treatment must be along special lines. I cannot believe, however, that even one-third of these groups contains sufferers from psychological faults that are due to sex repression and complexes named from various interesting characters in Greek mythology, but that they all need special therapy on psychological lines is certain; personality must be corrected in these cases by personality, whatever be the best and safest means to employ. Psychological injuries are as real as surgical injuries. Control, emotions, intellect, may all suffer as the result of some dreadful experience, physical or mental, and while it becomes evident that the balance of endocrine secretion and body chemistry is upset, one becomes impressed with the fact that those disorders are not primary and that some deeper injury has been sustained which has deranged the whole neuro-secretory system.

The study of such cases shows that all kinds of errors in thinking, feeling, and interpretation may occur. Wrong conceptions of life, exaggeration of ordinary sensation or the sense of pain, and misinterpretation of all sensations are among the most disturbing features of their sufferings, which are very real. Perhaps the most interesting are those who misinterpret symptoms and attribute to malicious external agencies the effects of their physical disorders. All such derive benefit from overflowing to their medical adviser; and the fact that such conversation does help them indicates one of the most successful lines of treatment, a combination of the confessional and the consulting room, by which the doctor can obtain information of psychological injuries and repression dating, perhaps, far back into childhood. The patient, having told the story, is frequently in a condition to be receptive of advice and reassurance. This can be done very well in most instances without resort either to complete psycho-analysis or to overt suggestion. In other cases, however, complete psycho-analysis or deliberate suggestion, either in the waking state or in a state of complete or partial hypnosis, seems to be necessary if a real improvement is to take place. In my experience the resort to psycho-analysis or to overt psychotherapy is not as necessary as has been urged by some; a perfectly good abreaction may be induced by ordinary sympathetic treatment by a medical man without probing

in the mud that exists in the unused memory of most of us. Later, an ordinary quiet but complete explanation that all sorts of sensations are natural and only harmful if they breed shame or fear, or are elevated to a position in life out of proportion to their importance, will in most cases set the patient on better lines of thought, and remove worry and dread. With this improvement will come also an improvement in the general condition which can be hastened, once the psychical difficulties are overcome, by suitable treatment along more ordinary lines.

The avenues by which wrong thinkers can be led back to the normal are many. To some, the appeal for fairness to others, for "playing the game" domestically or socially, is enough to correct their line of thought; to others, the appeal to their dread of being ridiculous is a strong incentive to correction—ridicule is the most powerful weapon to use against the Englishman. The removal of the idea that they are useless has cured many; this line of treatment often involves investigation into the patients' capacity and inclination, and the training of them in suitable work, either as a hobby or as a means of livelihood. Some are improved by being encouraged to develop some means of natural emotional expression, like music or dancing. To many the emotional appeal and development must be along religious lines. It is not enough, however, to prove that a line of thought is incorrect and foolish, to expel a devil and leave the room swept and garnished. Successful psychotherapy demands not only the extrusion of wrong ideas, it demands their replacement by right ideas. The patient must not only be convinced that his attitude is wrong, but must be supplied immediately with a chart of right conduct. On the hyperselfish must be urged the need for the consideration and the service of others; on the shrinking must be urged the necessity for courage and the capacity for achievement; on the dreamy and apathetic, the virtue of action; on the over-active, the value of relaxation and dreaming.

The separation of the psychologically abnormal from the general run of medical work can be carried to excess. Too much public discussion of the different kinds of neuroses and psychoses, as a group of diseases curiously apart from ordinary ailments, is apt to encourage the development of these very abnormalities among the more unstable part of the population. I think that since the death of Charcot there have been fewer hysterical manifestations of a major kind in France; there have been fewer cases of the very condition in which that great man's treatment was so dramatically successful. In our day a great many lazy people exist who before the advent of psycho-analysis would have been treated with a little thyroid or some other suitable medicament and ruthlessly told to work out their salvation in useful occupation, but now suffer from an "inferiority complex," and thus demand the sympathy due to a mysterious psychological fault which requires treatment of a very special kind. Others would far rather have their constipation treated by a complicated system of dieting and electrotherapy, reinforced, perhaps, by a course of post-hypnotic suggestion, than do what Winnie-the-Pooh calls "stoutness exercises" before breakfast, and walk two miles every morning and afternoon. Some three thousand years ago a court official called Naaman objected strongly to being advised to use as a therapeutic agent a river called Jordan, preferring the more magnificent "Abana and Pharpar, rivers of Damascus." The same psychology persists to-day, and the result is a widespread conviction that better results can be obtained by extraordinary than by ordinary means, many even preferring to seek advice outside the qualified group of medical practitioners, in the belief that there is a more efficient group of healers whose practice is unhampered by too much tradition and training. Irregular practitioners have sometimes great successes, and of these successes we hear much. The cured are only too willing to extol their own cleverness in going beyond the poor old plantigrade medical profession, and discovering the virtues of an unprescribed Abana. But do we hear as much about the failures? Fear of the little words "I told you so" deters many from an open confession, and patients merely creep back, a little shamefacedly, to seek the ministrations of a perfectly ordinary doctor. There is, however, something to

be said in excuse for those who seek the aid of the irregular practitioner. We have been too rigid in the past, adapting ourselves too slowly to new advances in science, and I fear that only by the sedulous cultivation in our practice of sense and sensibility can we live down the reputation for pride and prejudice which we seem to have acquired.

RADIOGRAPHIC THERAPY OF STERILITY.

ADDRESS BY DR. LOBRE.

At a meeting of the London Association of the Medical Women's Federation, held on February 25th at the British Medical Association's House, with Miss FRANCES HUXLEY in the chair, Dr. FRANÇILLON LOBRE delivered an address on the radiographic therapy of sterility.

Dr. Lobre said that whereas the method of tubal insufflation merely showed whether the tubes were or were not permeable, radiographic examination with lipiodol revealed the situation of an obstruction impairing tubal permeability, which was a point of capital importance if reparative surgery was contemplated. The radiographic method also supplied information about the exact position of the uterus and its form; the appearance of the tubal and uterine cavities; and the condition of the mucosa and its reactions to lipiodol. Such examination showed the importance of uterine and tubal spasm in a large number of the cases, and thus afforded valuable indications for the treatment of sterility.

Lipiodol was well tolerated by the tubes. Rubin had described some cases in which the radiographic method was followed by peritoneal reactions, but it was possible that the cases of infection recorded had followed the use of a liquid other than lipiodol. Laparotomies had been performed upon women who had received injections of lipiodol forty-eight hours previously, and no sign of peritoneal inflammation had been encountered. In certain cases where mistakes in technique had permitted injections to be made under too high pressure, small collections of oil had been found in the connective tissues, but no sign of inflammation. It was necessary to keep the pressure under strict control, but with lipiodol the pressure employed might be higher (up to 30 cm. of mercury) than was permissible when air was insufflated (in this case up to 23 cm. of mercury). Gases, being easily compressible, might induce a pressure at the point of resistance higher than that at the point of escape, and it was therefore logical not to exceed an initial pressure of 23 cm. for insufflation, in spite of the fact that a much higher pressure was required to produce experimental tubal rupture.

In collaboration with Dr. Jean Dalsace, Dr. Lobre had examined 230 women for sterility during the last three years. The cases examined were those in which a preliminary examination of the husband had eliminated the male factor, and in which careful clinical examination of the woman had proved negative. Contraindications to radiographic examination were the presence of active lesions, such as those accompanying metritis, salpingitis, appendicitis, or metrorrhagia. The best time for the exploration was during the week following menstruation, from the fourth to the twelfth day. At this period adnexal reactions could be most effectively avoided; moreover, the risk of injecting during pregnancy was eliminated by choosing a time shortly after menstruation had occurred. The patient had to be prepared for the examination with the greatest care. It was necessary to be sure that the cervical orifice was permeable, since radiographic examination was never to be immediately preceded by dilatation of the cervix. The examination itself had to be made with the care and precautions adopted in all minor gynaecological procedures. In order to ascertain whether the tubes were or were not permeable, a second radiogram had to be taken a few hours after the first to discover if the shadow still remained in the tubes, or was disseminated in patches in the abdominal cavity. For the purpose of this second examination the patient remained in the hospital or clinic for a few hours before returning to her home.

The gynaecologist and radiologist had to collaborate in the examination, which was not painful. The only