

XV

THE SCIENCE OF THE MIND

THE NEW PSYCHOLOGY—PSYCHO-ANALYSIS

IT is something of a paradox that the most difficult thing the mind finds to master is the mind itself. In recent years science has applied itself to the problem with a new keenness; much attention has been given to the special study of the mind of the child, and valuable results have been obtained from the study of animal behaviour. In particular there have been many investigators at work on what has become known as the New Psychology, which concerns itself largely with abnormal mental phenomena and subconscious operations—that part of mental activity which lies beyond the region of normal consciousness.

Practically all the recent work in psychology has gone to show that there are elements in our minds of which we are unconscious, and that these elements often take a greater share in shaping our behaviour than do the elements of which we are directly aware. The conception of the human mind has, in fact, undergone a profound change; it is revealed as a larger and more complicated affair than we had supposed, and we now see that what we had taken to be the mind is, in reality, a superficial although very valuable part of man's total mind.

Sense-experience forms the foundation of our mental life. In the course of long ages of evolution our sense-organs have evolved, and have given rise to that wonderful organ the human brain. It is through the senses that all the materials with which the mind builds up the higher forms of experience—memory, imagination, and thought—are obtained. For the senses are the Gateways of Knowledge.

It would be going beyond the scope of our subject to describe fully the evolution of our various organs of sense—the mechanism of the eye, the ear, and so on. By these instruments we are able to image and focus the world outside of us.

A sensation depends on some physical influ-

ence, the stimulus affecting some part of the outer or inner surfaces, or tissues of the body. In most cases there is a special organ adapted to receive the stimulus, and so to transform its action into a nerve-impulse for transmission to the brain, such as the eye, the ear, parts of the skin, and so on.

The acquisition of the sense of sight vastly enlarged the horizon and widened the mental range; and so with hearing, which is the most recently acquired of our specialised senses. We know that the senses are not infallible; they are limited and imperfect; but there is no evidence whatever that the development of our senses has reached finality.

The structure of the brain was briefly referred to in the section dealing with physiology. We need recall only that there are several main divisions of the brain, each with its own peculiar functions. The brain proper consists of the cerebrum, or larger brain, which occupies the whole of the upper and front parts of the cavity of the skull. It is divided into two great cerebral hemispheres, right and left, which are linked together by numerous nerve-fibres. The outer surface or cortex of the fore-brain is the seat of sensation and volition. It is a wrinkled or convoluted fold of grey cellular matter, which if smoothed out would cover a little over a foot and a half square. There are in the convoluted part of our fore-brain (the cerebral cortex) five or six times as many nerve-cells as there are human beings in the world, and the complexity of inter-relations is past all telling.

The cerebellum, or lesser brain, lies at the back of the head, and below it is the medulla, whose functions have been previously explained. We need not, therefore, further enlarge on the outline of our nervous system—the cerebrum, cerebellum, brain-stem, spinal cord, and nerves. That marvellous structure, the human brain, is the product of millions of years; its history

begins with life itself." The brain is a republic of nerve centres; each part has its own peculiar function—and all in inter-action. There are parts of the brain whose function is unknown—parts which we believe serve for memory, judgment, and imagination. There is reason to suppose that one part is the seat of the processes associated with remembrance of articulation; that another is similarly associated with memory of the sound of words; yet another part of the brain is associated with visual images of words and letters.

There is no lobe in the brain that is the seat of intelligence. It is the whole cortex, we might almost say the whole nervous system, or the whole body, that is concerned in intelligence, not any single region of it. It is by the plasticity, the power of adapting itself to new ways

of learning, registering, and repeating new co-ordinations of actions, that the brain is marked out from the rest of the body and even from the rest of the nervous system. Great ability, great intelligence even, are not dependent primarily on the brain.

§ 1

When we look back over the vaguely discerned evolution of Animal Behaviour, we find that it had its starting-point in the tentative movements of simple creatures, as has been explained in a previous chapter. We see such tentative movements in the very lowliest creatures (see p. 41).

At an early stage there must have been established a number of particular answers (involuntary muscular and nervous movements) to

Mind in
Evolution.



Photo: W. A. Mansell & Co.

ATTENTION.

From the painting by Sir John Everett Millais entitled "The Boyhood of Raleigh." The future navigator is seen listening to a tale of the sea. The intensity of attention is well illustrated. In the act of attention all conflicting tendencies are driven from the mind.

stimuli, which became enregistered in the creature, and these ingrained capacities increase in number. We discern a persisting state of the organism which *varies* the answers; there is probably a simple expression of conation or endeavour. And in time we come to perceive something of purposive behaviour. "With the establishment of a nervous system there was opened up, the possibility of a new kind of organisation—that of reflex actions and tropisms, which play an important rôle in behaviour, an organisation which heredity perpetuates." Reflex actions are automatic movements of nerve-cells and muscle-cells of lower animals, which secure a fit and proper answer to a recurrent stimulus. Tropisms are on a somewhat higher plane; they are forced or obligatory movements of the animal *as a whole*, that is to say, every creature of the same kind, and in the same physiological state, will behave in the same way. On a still higher level we have instinctive behaviour, "which reaches its purest expression in ants, bees, and wasps. In birds and mammals it is more likely to occur in cooperation with intelligence. Instinctive behaviour agrees with reflex acts in not requiring to be learned, in being dependent on hereditary nervous predispositions, and in being exhibited approximately in the same way by all similar individuals of the species."¹

We have discussed previously the history of these progressive evolutionary advances, culminating in intelligent behaviour, and we saw wherein lay their survival value. We need not consider them further here. Reflex actions, tropisms, and instinctive behaviour have become part of the inborn *hereditary* constitution of all higher animals.

The question may be asked, what, besides what we call our mental faculties and our instincts, forms part of our natural inheritance; in other words, what comprises the innate constitution of the human mind? The question is not easy to answer. Dr. McDougall puts the question in the following form: "Does the native basis of the mind comprise any disposition, in addition to those which enter into the composition of the instincts; and if so, to what extent are they systematically linked together?"

"We cannot answer this question with a

negative. There is certainly much beside the faculties and the instincts comprised within the native basis of each human mind. If there were not, it would be impossible adequately to account for the vast superiority of the mind of the human adult to that of the highest of the animal. Some of those who regard the mind purely from the physiological standpoint, and who believe that all we have called the structure of the mind can be adequately described in terms of the organised structure of the brain, take the view that the superiority of the native endowment of man consists, chiefly or wholly, in the presence in the brain of the infant of a great mass of unorganised nervous tissue which offers unlimited possibilities of progressive organisation. But, even if we accepted the assumption that the structure of the mind can be wholly described in terms of nervous disposition and their connections, we could not accept the view that nothing of the mental organisation beyond the instincts is innate."

The bearing which all this has on our present problem is this: can we say that the particular kind of activity known to us as thinking, feeling, and willing is implicit in the germ-cell just beginning to develop into an organism of great complexity—an individuality in the one-cell phase of its being, a mind-body or body-mind telescoped down. It varies, it makes experiments, it makes its own essays (in internal re-arrangement) in self-expression.

"The germ-cell is a sort of a blind artist; its sketches are submitted to the criticism of the fully formed organism, the seeing artist, who will put them in the proper light and bring out what there is in them of value.

"If the amœba has in its small way a mind, an aspect of itself corresponding to our mind, and if the amœba uses it when it goes hunting—two not unreasonable hypotheses—then it may be that the germ-cell has also its analogue of mind—a not unreasonable hypothesis, since it develops into a creature with a mind."¹

§ 2

It is not the province of psychology to explain what mind is; that belongs to the region of philosophy. Still, the great problem which holds an interest for us is concerned with

¹ J. Arthur Thomson, *The System of Animal Nature*.

the relation that exists between mind and body. Is mind independent and distinct from the body, or is it merely "an activity of the brain-cells, a product of nerve stimulation"?

Men have argued endlessly on the relation of mind and matter. To discuss, even briefly, the various theories—and there are many—would take a volume.

What the precise connection between mind and body is, no one, as yet, has been able to say with any degree of certainty. On the *mechanistic* view, as it may be called, the mind is a direct product of the brain, and has no separate independent existence. Every act of intelligence, every mental activity, is due to a physiological mechanism. Every thought "is the result of chemical or mechanical changes in the brain; an 'idea' is but an explosion or discharge of the brain-cell, an emotion is an activity of the brain bursting into flame; every feeling of love, aspiration, or fear can be explained as due to purely physical changes which produce the vapour of thought, or the aroma of virtue."

If it be held that during life "all mental processes have their physiological concomitants, it is clear that these physiological concomitants, namely, the molecular changes in the nerve-centre, would, if completely ascertained, afford an accurate index of the mental processes."

But no one has ever shown what the chemical or mechanical changes are by which thought and feeling are produced. Mechanism, as applied to mind, remains a mere hypothesis, an hypothesis, it may be added, to which philosophy gives no support.

Another view is that mind is a *separate existence*. The relation of the mind to body is, on this view, frequently held to be one of parallelism—the two series, mental and physical, are independent of each other, each runs its own



Photo: Rischgitz.

ARISTOTLE.

The most profound thinker of the Ancient World. He has been described as the best educated man of any age.

course, "as two railway trains running side by side on a double track, or two rays of light projected towards the same infinitely distant point, run parallel with one another in time and space." There is no cross effect from one to the other; each is a closed system, with its own laws. When consistently held, this view does not carry us much farther than the first view; each point in the mental series must have its counterpart in the physical

series; the laws that are established for the physical must also account for the psychical events.

A third view is *Animism*, the Soul-theory, the belief that there is an individual mind in each living animal body; that between the mind and its organism a vital relationship holds; that the life processes are both mental and physical; that the directing force in evolution is to be found in the minds of the individual organisms, the urge of feeling in the lower, the increasing strength of emotion and will, with the widening scope of interest and of thought, in the higher organisms. Many arguments can be brought forward both for and against this theory, but we cannot discuss these here.

There has also been much discussion of what is called *The Two-Aspect Theory*, to which biological facts incline many inquirers. The theory assumes a psycho-physical being—a reality which we know under two aspects; "we think of the organism as one; as, while it lives, an indissoluble psycho-physical being. . . . The living creature gives an account of itself in two ways. It can know itself as something extended and intricately built up, burning away, moving, throbbing; it can also know itself, as the seat of sensations, perceptions, feelings, wishes, thoughts. But there is not one process, thinking, and another process, cerebral metabolism (vital processes in nerve-cells); there is a

psycho-physical life—a reality which we know under two aspects. Cerebral, control and mental activity are, on this view, different aspects of one natural occurrence. What we have to do with is the unified life of a psycho-physical being, a body-mind or mind-body. The advantages of the two-aspect theory, if it is tenable, are that it does justice to the extraordinary intimate interdependence of what we may call 'mental processes' and 'brain-processes.' It regards them as two equally real aspects of the continuous life of the organisms. . . . The objective side is the body as a living whole; the subjective side, in Man's case, is the unity of mind."¹

In these days the now old-fashioned materialism of the previous generation, as Mr. Bertrand Russell says, "receives no support from modern physical science if, as seems to be the case, physics does not assume the existence of matter." We saw in a previous chapter ("The Foundation of the Universe"), what the new view of the constitution of matter is. The atom of every element of matter is revealed as a particle of electricity; what electricity itself is we do not know. But we see how it comes about that the physicist tends to think of "matter" as less and less material. So does the chemist, and so the biologist. In that sense the old-fashioned "materialism" has gone.

The view of Mr. William James and others is that the "stuff" of the world is neither mental nor material, but, for the lack of a better name, a "neutral stuff," out of which both are constructed. Mr. Bertrand Russell, in his work *The Analysis of Mind*, endeavours to develop this view as regards mental phenomena. We cannot sum up the problem better than another writer who says: "Supposing we were able to understand all the phenomena—chemical, physical, physiological—of this intricate mechanism, we would be no nearer a solution of the problem of the connection between the objective and subjective impacts of the phenomena. . . . A philosophy which recognises both sets of phenomena—mental and physical—mutually adjusted and ever interacting, recognises the facts of the case, and does not delude the mind by offering a solution which is in reality no solution at all.

¹ J. Arthur Thomson, *The System of Animal Nature*.

The difficulty is somewhat lessened if we assume that behind all physical and mental phenomena there is a metaphysical essence, conscious or unconscious, and that the phenomena we term physical and mental are only different sides of the same kind. Such an essence can never be known to science, and the discussion of the possibility of its existence and of its properties belongs to the province of philosophy."

§ 3

Psychology is the science of the mind, or more strictly, let us say, it is the science of the behaviour of living things; it includes the study of consciousness.

In the sense that the brain receives all those nervous impulses that result in consciousness, it would be true to say that the brain is the seat of consciousness. But that does not provide a solution of the problem of the origin of consciousness. "No one doubts that consciousness has a material substratum, but the problem of the relation between the mental state and the molecular movements on nervous matter is as far from solution as in the days when little was known of the physiology of the nervous system. The old-fashioned method was to assign to the mind certain so-called faculties—perception, conception, imagination, reason, will—to explain the operations which they denote. The mind has not its will here, its conscience there, and its reason somewhere else; it reasons, wills, and is conscientious as a whole. Thought, feeling, and will do not lie side by side, as it were, like stones in a mosaic, any of which could be removed without destroying the rest; they rather resemble the functions of the body, none of which are possible without the co-operation of all the others."²

Another way to describe mental activity was to regard every idea "as capable of existing in two conditions, or forms; on the one hand, it might be a conscious idea, or exist in consciousness; consciousness being spoken of as an illuminated chamber into which ideas enter in turn, to be lit up and active for a short period; and on the other hand, it might exist as an unconscious idea in the memory, a sort of Hades or dim underworld to which each idea, or its

² F. S. Granger, *Psychology*.



Photo: W. A. Mansell & Co.

SIR EDWIN LANDSEER'S PAINTING "A NAUGHTY CHILD."

A fine study that will suggest much to the student of psychology

ghost, returns after its brief exposure to the light of consciousness; there to await and to seize any opportunity of emerging again into light and life. Within this underworld ideas remain linked together in complex groupings. The whole assembly of ideas, thus linked in the obscurity of memory, constitutes the structure of the mind; and mental activity consists in each idea dragging up after it into the light whatever ideas are linked or associated with it."¹

When we come to the mind proper we may, using a purely pictorial analogy, regard it as

¹ Wm. McDougall, *Psychology*.

consisting of three layers. The top layer we may call the region of the conscious life. It is, as it were, a vividly illuminated region, where everything that goes on is clearly seen. It is to this region that we normally refer when we seek the explanation of our conduct, and, as we shall see, the explanations we obtain in that way are often wrong. A little below this clear region is a semi-conscious region, a region which can become accessible to us by effort. It is in this region, for instance, that the information which is not present to our minds, but which we *can* remember, may be considered

to be stored. Sometimes the contents of this region can be exhumed only by considerable effort, sometimes a very slight stimulus is sufficient. Beneath this layer, again, lies the region of the unconscious, and this region is, normally, quite inaccessible to our conscious mind. The description we have given is, of course, figurative, since we cannot suppose that the mind occupies space. But this division into layers is helpful in enabling us to understand the modern theories of the mind. The unconscious is the seat of the mental elements associated with the great primary instincts, and it is the great source of psychic energy. Of the activities going on in it we have no direct knowledge; we can infer something, however, as we shall see later, from observation, and more especially, according to some authorities, from *dreams*. The unconscious is the very basis of the psychic life of the individual.

Mental phenomena never occur singly, but always in some complex combination or another. It will help us in understanding the nature of the mind to consider it as a *network of mental elements*. Every mental element, every idea as we say, which comes into the conscious mind, calls up others. There are *associations of ideas*, to use the language of the older psychologists. It is because ideas are associated that we are able to go about our daily lives. If no ideas suggested any others, or if others were suggested purely at haphazard, we should never be able even to cross the road. A number of mental elements associated together so as to form some more or less loosely knit system is called a complex. To some men, for instance, the sight or sound of a typewriter may always, or usually, suggest to them an office; the smell of a certain flower may always bring back some early experience, and so on. Associations of this kind—associations of ideas, as it were—are called *complexes*. We may think, if we like, of ideas forming groups, and the whole of the contents of the mind as made up of groups of ideas—*complexes*. Further, complexes vary enormously in the emotional energy associated with them. Besides the great number of minor complexes brought about by a man's education, the nature of his work, and so on, there are so-called universal complexes. These are the

complexes which centre round the three great primary instincts, or groups of instincts, and they are known as the sex-complex; the ego-complex, and the herd-complex.

Complexes which directly centre round a great primary instinct such as sex are associated with a great fund of emotional energy. The actual mental elements present in the sex-complex of any particular man, besides depending on inherited characteristics, depend also on his personal history. The ego-complex, associated with the primary instincts of nutrition and self-preservation, has most of its elements beneath the conscious level; and the same may be said of the herd-complex, which depends upon the gregarious instinct in man, and which plays an enormously important part in his life, as we shall see.

Amongst the three great universal complexes the ego-complex is the oldest and most profound. This is the complex with which is associated man's recognition of "his self." This very powerful complex may give rise to all sorts of unpleasant manifestations, to various exhibitions of greed and of the desire of self-aggrandisement; but it also gives rise to some of the most beneficent of man's activities. Amongst these we may mention the desire for *construction*, for the making of something which is a personal achievement, whether it be a house, a poem, or a system of philosophy. The desire to construct has certainly been one of the most potent factors in human advancement.

The second great universal complex is the herd-complex, and this, as we have already said, depends upon the fact that man is gregarious. We do not know at what point in man's development he first developed the gregarious instinct. It must have been quite early, however, that man began to live in association with his fellows. The advantages bestowed by gregariousness are obvious. But the instinct of gregariousness brings with it certain consequences which are of the utmost importance in the psychic life of man. This instinct brings with it great *suggestibility*. The individual, as a member of the herd, must be very suggestible to impulses coming from the herd, in order to act in harmony with it.

He must be able to yield unquestioning obedience to the voice of the herd. In the case of man his rational faculty, combined with his suggestibility as a gregarious animal, leads to the most diversified manifestations. The great bulk of man's opinions are in reality strictly non-rational, and are products purely of herd-suggestion; but that does not prevent him rationalising them. Many of them he does not trouble to rationalise. They appear to him "obvious"—as obvious as that good food is desirable; they come with *instinctive* force. The moral code in force in a community furnishes a set of beliefs of this kind. This set of beliefs changes from time to time and from country to country, but whatever set of beliefs may be in vogue in any particular community at any particular time is "obviously" right.

We cannot consider in detail the manifestations of the three great groups of primary instincts, but we may discuss, for a moment, two types, in one or other of which nearly every human being

can be classed. These two types of human beings are called by Mr. Trotter the *stable* and *unstable* types.

The *stable* type is the type which is often described as forming the backbone of the country. A man of this kind is energetic, strong-willed, and full of settled convictions. He is perfectly at home with the laws and traditions of the community of which he is a member. His aims are of the kind that the community as a whole can understand and approve, and he is steadfast in his pursuit of them. He has decided views on moral



Photo: L. E. A.
THE LATE PROF. WILLIAM JAMES.
Professor of Psychology at Harvard, and investigator of psychic phenomena in America.

questions, and on political and any other subjects. He is never in doubt as to what is right and what is wrong.

The great drawback to this type is its insensitiveness to experience; it is incapable of surveying any question from an entirely fresh standpoint. Indeed, it is apt to regard the searching questioning of accepted and established things, such as a code of moralities or a system of politics, as either foolish or wicked or both. Great changes in current practice and ideas, however desirable such changes may be, cannot be effected by the

class of people—and it predominates in numbers—which has the strong prevailing gregarious instinct—in other words, in which the herd-complex is strongly engrained.

The *unstable* type has qualities almost exactly opposite to those of the stable type. Thus, a man of this type has very few settled convictions, although he may have plenty of enthusiasms. He can easily be won to a new cause, and he as easily falls away therefrom. He may undertake

a number of projects, but it is unlikely that he will persist with any one of them long enough to carry it to a successful conclusion. He has what is called a weak will, and he can by no means accept the ruling of the community on all questions. His great positive merit is his sensitiveness to experience, and, indeed, it is from this that all his trouble springs. He is always changing his mind because he is always open to fresh impressions. He is, usually, the intellectual superior of the stable type, although the stable type often despises



Photo: Elliott & Fry, Ltd.
DR. WILLIAM MCDUGALL.
Professor of Psychology, Harvard University, author of several important works on psychology, including *Body and Mind*, *A History and a Defence of Animism*.

him. But each type has its great disadvantage, and neither represents what a human being could and should be.

The fact that different complexes may be incompatible with one another leads us to the important question of *conflict*. A perfectly healthy mind is a mind which has established complete harmony between its different complexes. But the perfectly healthy mind, in this sense, is very rare; we usually find that several of a man's complexes are incompatible with one another, and on those occasions when more than one are aroused there is *conflict* between them. Thus it may often happen that a man's "selfish" desires, those springing perhaps from his ego-complex or his sex-complex, conflict with the moral code of the community, a code which has great weight with him because it is associated with his herd-complex. Such conflicts are favourite themes for novelists: the father torn between patriotism and his love for his son; the intending monk torn between his religion and his love of his family; the man torn between an illicit love passion and his sense of morality. Conflict plays a prominent part in the psychic life of most people, and it leads to very important consequences. For the conflict must be settled, and there are two very important ways of settling it. There is the method of *rationalisation*. One of the conflicting complexes is allowed to triumph, but not consciously. Reasons are invented for the resultant action which have nothing to do with its psychic causes, but which prevent the man from feeling "ashamed" as we say. Thus a primitive brutal desire for revenge may be disguised as justice. An exhibition of ruthless greed—as in some unscrupulous business deal, for instance—will be explained by pointing out that it is for the good of the community that its most efficient citizens should come to the top, and so with other conflicts.

Another very important method of settling a painful conflict is by *repression* of one of its factors. It is this method which has been chiefly studied by Freud, and he has succeeded in showing how very great its importance is. A man decides completely to ignore one of the conflicting complexes—he puts it out of his mind. But, as Freud has shown, the ignored complex is

not thereby destroyed. It is repressed into the unconscious, but it is still energetic and may manifest its existence in a number of ways, ranging from certain phenomena of *forgetfulness* down to hysteria and insanity. It may happen, for instance, that the repressed complex leads to a certain kind of forgetfulness, a forgetfulness of those things with which it is associated. A man may forget an appointment from which he anticipated something unpleasant, he may forget the existence of unpaid bills. Such cases are cases of *active* forgetting, and are to be distinguished from cases of *passive* forgetting, where the matter is forgotten simply because it made very little impression on the mind. A slip in speaking or writing may sometimes testify to a repressed complex; the substituted word corresponding to a wish, but a repressed wish, of the speaker or writer, as when the President of the Austrian Lower House announced that the sitting was closed when he should have said it was opened, the reason being that he privately expected no good from the sitting and would have liked it closed.

§ 4

PSYCHO-ANALYSIS

A comparatively new branch of psychology is that closely associated with the work of Professor Freud of Vienna. It deals mainly with the phenomena of the unconscious. Whatever may be said of Freudian theories, they have at least opened up a wide field of study. Part of Freud's doctrine has become fairly well established; on the other hand, a great deal of it is regarded as merely ingenious theory, which is not generally accepted. This "new" psychology is of very great interest, because of the bearing it has on medical practice and the work of the teacher.

The chief theory of the Freudian psychology is, that there is a great part of the mind of which we are unconscious; that this unconscious part exercises an enormous influence upon our thoughts and actions, without ourselves being aware of it. Freud conceived the idea that the influence of the unconscious mind was especially active as a cause of dreams, and thus

he was led to his now familiar theory of the interpretation of dreams.

The work of Professor Freud, his disciples and his critics, has thrown a flood of light upon the working of the human mind, and led to curious alterations of our views upon dreams, insanity, myths, art, and religion. In dealing with patients who were suffering mainly from functional diseases of the nervous system, Freud found that what had been regarded as the symptoms of the disease, such as paralysis of the limbs, blindness, deafness, and mutism, were frequently connected in some definite way with the original onset of the disease; blindness, for example, might date from some violently painful occurrence of which the patient had been a witness. This connection was not as a rule recognised by the patient's waking consciousness, but it revealed itself occasionally to the doctor when the patient was hypnotised; sometimes also it was brought out by the dreams which the patient described; but in general the ordinary consciousness of the subject resisted all attempts to probe back to the original cause of the disease.

Turning his attention to dreams, Freud found that in the case of normal individuals also there were painful experiences, never revived in the fully conscious mind, but playing a great part in the dreams of the subject, appearing there in a more or less disguised form; and that the interpretation of the dream in both normal and abnormal subjects invariably led back to some wish or desire of the individual, which it was impossible for him, for physical, moral, or social reasons, to realise in waking life. The dream was the mimic realisation of the wish.

The instinctive or voluntary forgetting, Freud called Repression; the repressed ideas were not, however, destroyed, but were constantly endeavouring to force their way back into consciousness. He gave the name of the "unconscious" to the mass of repressed memories of all kinds. For the repression of a wish involves also the repression of the whole system of experience to which the wish belongs;

hence, for example, the fact that we can rarely remember our infancy-time at all.

We have all some experience of what is called *subconsciousness*; an idea, as it passes to and from the focus of consciousness, gradually becomes clear and vivid, then fades away into dimness and vagueness, till it is merged in the general mass of feeling and loses all distinctiveness; a word is "on the tip of the tongue," later it is clearly thought and spoken. I have an appointment to remember, I do not think of it for hours, and then—in good time, perhaps—it walks into my "consciousness." I resolve to awake at six in the morning, and—if my mind is of the right kind—as the clock strikes six, or just before it, I awake. These are different cases in which an idea, a thought, is apparently not in conscious-

ness, and yet not wholly out of it. The term "subconsciousness" has been used for this class of phenomena, where, apart from the "dominant" or "personal" consciousness, certain strands of experience, which have once been conscious, continue somehow to live, and in due time make their influence felt in the dominant consciousness.

The theory of Freud is, that in the unconscious part of the mind there lie dormant memories of the past and especially "repressed" impulses. These repressions represent the resistance we make to a wish or impulse which we think we ought not to satisfy, because it conflicts with some other interest; or they mean the effort we make to put out of our mind some unpleasant memory. The effort to repress may not be deliberate, it may be unconscious repression. In any case there may be a repression to such an extent that the memories pass entirely from us, or as it is held, they are pushed deep into the unconscious, where they continue to exist. We are asked to believe that "the unconscious includes many impulses and memories which remain buried in the depths of the mind," and that they persist in trying to return to the living mind. Further, it is said that to some extent they do so, influencing the mental life even



PROFESSOR FREUD.
The "New Psychology" is closely associated with his name. His doctrines are explained in the section dealing with Psycho-analysis.

although we are not conscious of the influence at work. In this way repressed tendencies are supposed to get a partial satisfaction.

§ 5

The records of medical men in their work connected with nerve cases in military hospitals during the war has provided much material for the study of abnormal psychology of this kind. Cures of paralysis of various organs, of morbid obsessions, and unreasonable fears have been recorded and described by responsible members of the medical profession. The origin of many mental troubles has been traced to repression of disturbing emotional experiences, bygone and forgotten by the patient. The recalling or revival of such lost memories of patients by medical men skilled in psychopathology have, by clearing the mind of the patient, enabled physicians to effect many striking cures of mental disorder.

The theory is that the bringing to light and the re-living of the suppressed emotional experiences is a means of getting rid of excessive emotion. The patient is enabled to assume a new attitude towards them. By way of illustration we may give one instance :

The following case of the influence of forgotten experience is described by Dr. W. H. Rivers in the *Lancet*, and we take this excellent summary of it as given by Professor Valentine in his *Dreams and the Unconscious*.

" It is the case of a young medical officer, who even before the war had a horror of closed-in spaces, such as tunnels and narrow cells. He would never travel by the tube railway, and was seized with fear in a train which passed through a tunnel. One can imagine his intense distress when on entering a dug-out he was given a spade and told it was for use in case he was buried alive. His sleep was greatly disturbed, and his health became so bad that he was invalided home. Instructions to keep his thoughts from the war and to dwell exclusively on pleasant topics proved useless. He had terrifying dreams of warfare, from which he would wake, sweating profusely, and thinking he was dying. At this stage he came under the care of Dr. Rivers. The patient was asked to try and remember any dreams he might have

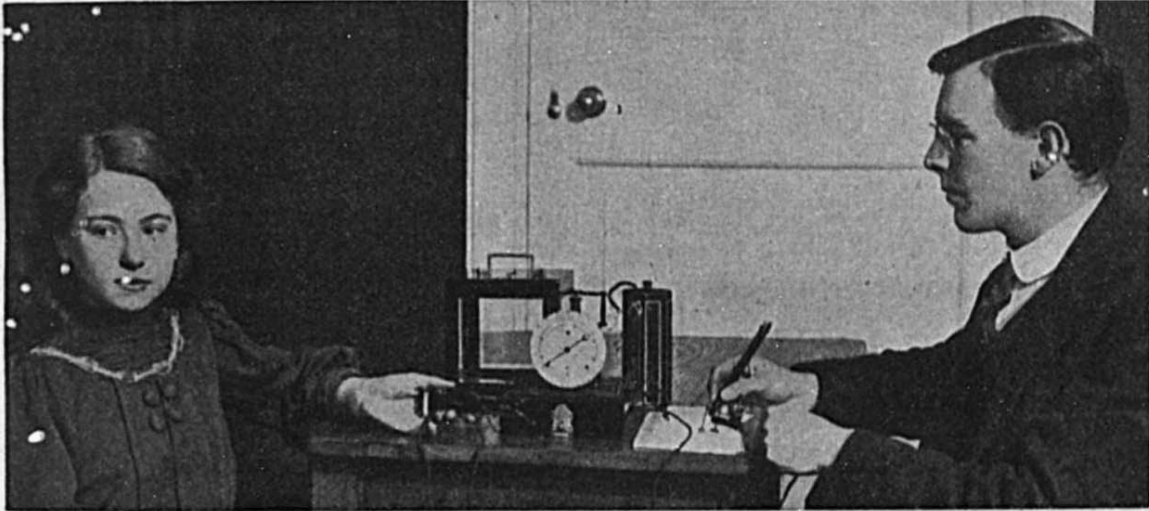
and to record any memories which came into his mind while thinking over the dreams. Shortly afterwards he had a dream, and as he lay in bed thinking it over there came into his mind an incident which seemed to have happened when he was about three years of age, and which had so greatly affected him at the time that it now seemed to the patient almost impossible that it could ever have been forgotten. He recalled that, as a little boy, he and his friends used to visit an old man in a house near his own, and to take him odd articles discarded at home, in return for which they received a copper or two. On one occasion he went alone, down the long, dark passage leading to the old man's home, and on turning back found that the door at the opening of the passage had banged to, and he was unable to escape. Just then a dog in the passage began to bark savagely, and the little child was terrified, and continued so until he was released. After another dream the patient woke up to find himself repeating " McCann! McCann! " It occurred to him, suddenly, that this was the name of the old man. Inquiry of the parents of the patient revealed the fact that an old rag-and-bone man had lived in such a house as the patient remembered, and that his name was McCann.

" The result of this recovery of memory, with the explanation of his abnormal fears of closed-in spaces, had a great effect on the patient. A few days afterwards he lost his fear of closed-in spaces, and he afterwards travelled in tube railways and tunnels without discomfort. Indeed, he was so confident of himself at once that he wished Dr. Rivers to lock him up in some subterranean chamber of the hospital as a proof of his cure. The particular point to be noticed here is that an entirely forgotten experience continued, apparently, to have an influence upon conscious mental life. Other points of interest are these: that the original experience was an intensely emotional and disturbing one; that the experience was recalled through reflecting on a dream; that the conscious effort of will to banish the unreasoning fears had no effect; that the fearsome experience, though repressed until forgotten, found its way out to consciousness through the repeated emotions of fear. This constant fear

was stimulated by being in closed-in spaces, that is, by situations similar to the original one, though that was forgotten."

"There are many such cases as this on record. A great deal of work has been done on similar lines, and the study of disorders of various kinds, having a mental origin, has been put on a scientific basis within the last few years. This is not the place to describe the methods of the prac-

now possess a theory which undoubtedly covers a very large part of dream phenomena, even although it certainly does not cover the whole. This theory is, briefly, that a dream is the symbolic fulfilment of a repressed wish; the wish has been repressed because, for one reason or another, its appearance in the conscious mind is attended with pain. But, as we have seen, repressed elements do not lose their



MR. CYRIL BURT, PSYCHOLOGIST TO THE LONDON COUNTY COUNCIL, MEASURING THE SPEED OF THE THOUGHT OF A CHILD WITH A CHRONOSCOPE TO TWO-HUNDREDTHS OF A SECOND.

itioner; the principles followed depend on individual cases.

§ 6

Much, probably far too much, has been made of the claim that psycho-analysis may be applied to the interpretation of dreams.

Dreams. The starting-point from which Freud's theory was developed was the interpretation of dreams, based on the assumption that dreams are the symbolical expression of repressed tendencies. To claim that every dream is determined by the subconscious working of a repressed tendency is unwarrantable, and the theory is not accepted by those most qualified to speak on the subject. On the other hand, it would be an extreme view, as Dr. William Brown says, to deny all meaning to dreams, and regard them as merely the confused and jumbled reappearance during sleep of memories belonging to the person's past history, strung together in any chance order.

The recent work on dream analysis, however, has added immensely to our knowledge, and we

vitality; they continue to work and they endeavour, as it were, to manifest themselves in some way or another. Now during sleep the barriers between the conscious and the unconscious are to some extent relaxed. Elements which are ruthlessly repressed in the waking life are now subjected to a less severe repression. But these elements cannot emerge in their naked purity, as it were; they exhibit themselves in a disguised form, often of the most fantastic description. In this way the wish secures a partial satisfaction. In his book on *The Interpretation of Dreams*, Freud gives a large number of such cases of symbolic fulfilment, and explains the technical processes by which these dreams are related to forgotten episodes in the life of the patient. Many of these cases are more ingenious than convincing.

Not all dreams are due to repressed wishes. Many dreams are more or less inchoate reproductions of impressions received during the day; such dreams, however, have a fragmentary character. In very many cases where the

dream is a rounded and completed whole it is also an allegory, a symbolic manifestation of elements which have been repressed into the unconscious. The repressed elements, even so, do not secure complete fulfilment. Repression is still operative, although it is relaxed. There is still what Freud calls the 'censor.' Dreams may illustrate very interestingly, in fact, the indirect ways in which psychic energy seeks an outlet, when direct satisfaction is for some reason or other denied it. Many works of art are similar to dreams in this respect. In some cases of very deep and powerful repressed complexes, a dream fulfilment may not be satisfactory. An actual pathological condition may be set up; hysteria, insanity, and dissociations of personality, as in certain well-known cases of double personality, may be caused by the repressed complex. Many cases of this kind were brought into being by the terrible psychic strains of the war.

It is admitted that a certain class of dreams may be possible of interpretation, but we cannot discuss the subject further here; it cannot be accepted that Freud's theory of repression accounts satisfactorily for all dreams.

Another view is that which regards dreams in quite a different light. Dr. William Brown puts it in these words: "The function of a dream is to guard sleep. Sleep is an instinct like fear, flight, and the rest, and has a function which has developed in the course of evolution. At night this instinct of sleep comes into play, but it finds itself in conflict with other instincts and tendencies, as well as with external impulses. Desires, cravings, anxieties, the memories of earlier days, all of which are the lower and fundamental elements of the mind, well up and strive towards consciousness, while the main personality is in abeyance. If they reach consciousness sleep is at an end, but the dream, which is a sort of intermediary form of consciousness, intervenes, and makes the impulses innocuous, so that sleep persists. This theory covers the entire ground of all types of dreams."

There are other aspects of abnormal psychology which imply subconscious operations with which we have not dealt. The subject of telepathy, clairvoyance, materialisations, and other phenomena which appertain to psychic experience will be discussed by Sir Oliver Lodge in the following chapter.

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