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Psychology:

**INTRODUCTION TO
PRESENT DAY PSYCHOLOGY**

INTRODUCTION TO PRESENT DAY PSYCHOLOGY

Twenty-four lectures to the W.E.A. at
READING UNIVERSITY

by

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With a Foreword by

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NEW YORK

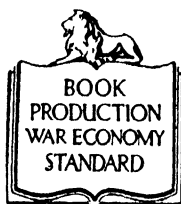
TORONTO

STAPLES PRESS LIMITED

John Bale Medical Publications Limited

CAVENDISH PLACE, LONDON, W1

FIRST PUBLISHED 1946



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FOREWORD

Aware of the keen and active interest which these lectures excited in the audience to which they were addressed, I gladly contribute a foreword now the contents are presented to a wider circle. Readers will find the book lucid, and, in the best sense of the word, simple. Its limitations are made clear by the author. It is an introduction to psychology, not a textbook. Its aim is to show what manner of topics is the concern of psychology, not to present in detail the mass of technical knowledge which has been acquired. The bibliography at the end gives good guidance to those who, attracted by this pleasant sketch of the territory, may wish to explore it further.

During recent years the science has gained a dangerous popularity, and many dubious guides have offered themselves to the public. Let it be known that the advancement and application of psychology is now in charge of an established profession, whose members accept strict standards of training, of conduct, and of social responsibility. Those who make contact with psychology for the first time should inquire into the credentials and standing of those who offer to assist them. Dr. Boenheim is a medical psychologist and so bound by the code of another great profession. He is a man of wide experience in important posts, and I can claim on his behalf authority for what he puts before his public.

I am an academic psychologist, and so less interested in the application of psychology than in theories and the advancement of knowledge. Yet he and I meet in the assurance that we are members of the same profession, and moved by the same scientific ideals. From the fellowship between us a moral may be drawn. It may have seemed to you in the beginning that all was uncertainty and dispute. Where was truth to be found among the conflicting schools? But all sciences are controversial at their growing points, and it is just there that scientists find their work most interesting and exciting. So they form rival schools, and each seeks to fit all the facts into its own theories. They take for granted a great body of agreement without which there could be no sensible dispute. Do not be dismayed, then, if you hear a deafening clamour of argument. Being a newcomer you

Part I—PSYCHOLOGY

INTRODUCTION

One could approach the vast subject of psychology from many very different angles. My choice will be governed by the practical considerations involved in lecturing to an audience composed of people who are engaged in widely differing occupations. Some are manual workers, others are clerks or civil servants. Many of you will be attending classes on psychology for the first time, others – social and nursery workers, or teachers – have some knowledge of the subject and are anxious to increase it, whilst a few have undergone psychological training.

Under these circumstances I have to find a level of instruction which will be of interest to the majority of my listeners. Obviously it must be simple enough for the untrained people to follow, and, on the other hand, matter of interest to the more advanced students should be included. I will do my best to meet the needs of all sections of my audience.

A series of twenty-four lectures cannot, of course, give you a complete picture of psychology. What I really want to do is to make you think on psychological lines. I want to encourage you to look at familiar things in a new light, but it is certainly not my aim to train you to be psychologists. Everyone knows that there is a danger in acquiring a smattering of knowledge. There are those who, having read popular periodicals on psychology, feel entitled to give advice to their friends when they seem to be in difficulties. Others, former patients, seem to think that having had psychological treatment themselves they are qualified to treat others although they have neither the knowledge nor the necessary objectivity. I do not want to add to the number of such people, but since psychology is woven into the fabric of everyday life, it is clearly desirable that those who are aware of the responsibilities of citizenship should have some knowledge of the subject.

You may ask why it is important that you should have a knowledge of psychology if you cannot put it into practice and I should reply that, though you will not be able to use the knowledge you acquire in treating special cases as the psychiatrist

does, you will be able to use it in everyday life. If I were to ask you if you thought common sense important you would call it a strange question. You would reply that there is hardly any situation in life, any problem, any conflict, any task which does not require the exercise of common sense. It would not be true to say that common sense is always decisive but it should be taken into account, though irrational considerations and feelings often get the upper hand. The same applies to psychology. It is as important as common sense, it is relevant to all aspects of life and should always play its part. This raises the question of the difference between common sense and psychology; they are not identical but they do not exclude each other; if they do, then something is wrong with psychology.

Common sense could be defined as an intellectual function which enables the individual to face a problem and to deal with it.

Psychology is a science which seeks to understand the working of the mind, it clarifies relationships and shows causes and effects in their proper proportion. It reinforces common sense by adding knowledge.

In studying the elements of individual psychology we endeavour to acquire the necessary knowledge to enable us to understand the individual, not only as an individual, but in his relationship to the group in which he lives. There are constant interactions between the individual and his group as such and between him and other members of the group, and since human beings can only live in groups – the solitary hermit way of life cannot be considered normal – one might say that social psychology covers the whole of life.

HISTORY

Psychology is a young science compared with philosophy and medicine. Its beginning has no definite date and though early traces of it can be found, in its present form it is not much more than a hundred years old. As I have pointed out, psychology is the science which deals with the mind, and endeavours to understand its fundamental features and development. No science is completely isolated and, as you will see, psychology is connected with many related sciences and has received impulses from various sources, though philosophy, education and medicine are its most directly traceable ancestors.

The collection of data and the observation of phenomena are common to all sciences, and men have pursued the search for knowledge from the beginning of time. The Greek philosophers, Socrates, Plato and Aristotle, during the third and fourth centuries before Christ, provided a basis for the study of human behaviour. From that time onwards philosophers have been particularly interested in studying the human mind, because the mind is the vehicle of knowledge. It is the organ on which we must depend if we want to understand the universe.

When we consider philosophy as it has developed through the centuries, we find that there is hardly one philosopher who has not made some contribution to psychology, but it would take too long to name them all or to go into details of the nature of their various contributions.

It is, however, only during the last hundred years that psychology has taken shape and emerged as a separate science. It may be of interest if I give you the names of some of the pioneers. In 1816 J. F. Herbart wrote a textbook on psychology. Thomas Brown who was Professor of moral philosophy at Edinburgh University from 1810 to 1820 wrote a book called *The Philosophy of the Human Mind* and about the same time James Mill wrote *The Analysis of the Phenomena of the Human Mind*, and others followed their lead. The first psychological laboratory was established in Leipzig by Wilhelm Wundt, who in 1873 published a book entitled *Principles of Physiological Psychology*.

Wundt was the founder of modern experimental psychology, which can be described as the observations of the reactions

of the individual. The method used is to set the subject various tasks, such as giving him certain words which he is asked to associate with other words, or he is asked to deal with certain, prepared, situations. In all cases his reactions are carefully timed and noted. This method has been developed in great detail, and various kinds of apparatus have been constructed to assist in the collection of data about the working of the mind. Present day psychology has much to thank Wilhelm Wundt for and those who worked with him in the early days of experimental psychology. To mention only one example, our modern testing system has been almost entirely built up on the foundations laid by those early workers.

One of the reasons why the study of psychology is so complicated is that it has been developed in many different ways, and contributions from widely diverse sources have given it its present form.

I mentioned just now Wundt's book on physiological psychology. This leads us to another avenue of psychological development. Physiology is the science which deals with the structure and function of the body. Part of its work is the study of the nervous system and this is where the contact with psychology is made. Indeed, it would be true to say that the development of modern psychology cannot be dissociated from the development of modern physiology. Some of the most important work on this subject was done by Johannes Muller and Wilhelm Helmholtz, who published works on the structure of the eye and on sound perception.

I must make clear that the different sciences developed over the same period, sometimes separately, sometimes influencing each other, but eventually converging and leading to progressive understanding.

So far I have mentioned two of the contributing factors in the evolution of psychology. We now come to another science which, of the utmost importance in itself, has also made valuable contributions to the development of psychology, that is biology. The names of Darwin and Mendel are well-known. I must remind you that in *The Origin of Species* published in 1861 and *Descent of Man* published in 1871, Darwin expounds his theory of the development of the species. He takes as the basis of his contention, the principle of natural selection within the species in the struggle for life, and the variation in the species which

influences both the struggle and the selection. It was Darwin who first drew attention to the similarities between the mental processes of man and those of animals, and it is on the basis of his work that modern animal psychology has been developed.

The last great science which has played an important part in the formation of modern psychology is education. Men like Rousseau, Pestalozzi and Froebel developed the psychological approach in place of the mechanical imparting of information. They studied the special characteristics of the mind, and adapted methods of teaching, taking these characteristics into consideration. Incidentally psychology has been able to repay part of its debt to education by making some important contributions to the development of modern educational methods.

From this you will see that the development of modern psychology has been a very gradual process, and philosophy, physiology, biology and education have all left their marks upon it.

PSYCHOLOGICAL TERMS

At this stage I think I should give you some definitions of elementary psychological terms. I do so to ensure your being able to follow my further lectures. Thouless, whose excellent and clear definitions I follow in this chapter, says: 'Definition is good as a servant, but bad as a master'. Like all sciences psychology has its 'jargon', and I am afraid there is a tendency among some psychologists to talk too much in terms that are unintelligible to the lay person. I will try to avoid this, but you will understand that, in describing some phenomena within the psychological realm, it is necessary to use scientific terms. When I use these terms I shall be doing so for the sake of clarity and not in order to preserve professional secrecy.

REFLEXES AND INSTINCTS

If we study the behaviour of animals and men, we find that in ordinary living there are certain actions that are common to all members of the same species. The lower the form of life, the simpler the action. These are known as 'reaction patterns' and the simplest of these is known as 'tropism'. Plants that react to the sun, either by turning towards it or away from it are demonstrating positive or negative 'heliotropism'. Some of the most primitive species of animals react in this way and will swim towards the light. Tropism as such has no importance for human psychology, but it is the lowest point at which pattern reaction can be observed.

Coming up the scale of reactions, the next stage is the 'reflex'. The reflex is also an innate pattern reaction but different from tropism in that it is not the reaction of the whole organism, but only of a special part of it. Another difference is that for this reaction to take place there must be a nerve path.

The reflex arc as it is called has three main parts: -

1. The receptor - the point at which the action takes place.
2. The conducting path - a nerve which connects the receptor to
3. The effector - the point where the reaction occurs.

There are conscious reflexes, e.g. sneezing or coughing and there are unconscious reflexes, e.g. iris-contraction if light comes into the eye. Reflexes play a great part in modern psychology. Reflexes in human beings are often extremely complicated. There is a definite connection in higher animals between the peripheral reflex and the central nervous system. One could say that the more developed parts of the brain exercise a general supervision and direction.

Still higher up the scale we come to instincts. These are also innate reaction patterns, but of much greater complexity than reflexes. There are four points of importance to be noted in connection with instincts.

1. Adaptability, which is far greater than in reflexes.
2. Universality within the same species.
3. The remarkable degree of perfection in performance from the beginning.
4. The connection with the emotions as soon as the working of the instinct is threatened.

Adaptability – we find that the higher up the scale of animal life we go, the greater is the range of adaptability.

The higher animals can adapt their instincts to suit their needs, though these adaptations are not necessarily a function of the intelligence. No thought or foresight is necessary and probably does not exist. In lower forms of life we find the range restricted. Observation of bees showed that their instincts only functioned adequately as long as the demands made on them were within normal limits. When the hive was moved, it was observed that the bees were thrown into great confusion and could not adapt themselves to the changed conditions.

Universality – we find that members of the same species have the same instincts. As a rule we do not find great individual differences.

Relative perfection – here we find a great difference between human beings and animals. In animals instincts work with a high degree of perfection from the beginning. Think of young ducks taken to the water for the first time, who swim at once. Young birds fly as soon as they are pushed out of the nest. This does not mean that there is no development of the function, but it takes the form of improvement by practice, and perfection is soon reached after which no further progress is possible.

Emotional connection – the connection of instincts with emotions is common to both human beings and animals. A dog disturbed whilst eating will certainly show anger. There is a difference of opinion whether animals experience any emotions unconnected with their natural functions, if, for example, they experience pleasure in performing some actions, or if they are capable of experiencing grief. However, it seems true to say that emotion in animals seems mainly to be of biological importance. If danger threatens, the emotion experienced increases the power of instinct to perform its function.

The instincts of human beings are not fundamentally different from those of animals. You have only to think of people under strong emotional stress to realise that we often fall back to our primitive reaction pattern. To a great extent human beings have, however, modified their instinctive reactions, they have adapted themselves to their life and its needs and do not, under normal conditions, react in a primitive way.

The modifications of the primitive instinct in man follow three main lines. Modification by experience, modification through thought and modification made by the assertion of individuality in contrast to the general behaviour of the species. Human behaviour has its roots in innate instincts, but we also possess an inborn plasticity which enables us to adjust ourselves to changing conditions.

McDougall has made an elaborate classification of human instincts enumerating fourteen different kinds, among which are the instincts for combat, repulsion, curiosity, submission, and food seeking. I think, however, for our purpose, the best classification is the biological one which gives us three primary instincts. First, self preservation – this covers the whole struggle for existence, reactions to hunger, danger, etc.; second, the reproductive instinct upon which depends the continuance of the race; and third the herd or gregarious instinct which is the basis of social life. These are the main classifications and under these headings the other instincts can be grouped.

There is no antithesis between instinct and intelligence, there is in fact co-operation. This adaptation and modification of instincts which I have described is one of the functions of the intelligence.

INTELLIGENCE AND TESTS

I said, in my last lecture, that instincts and intelligence co-operate with each other. Some people have even gone so far as to say that intelligence is the power to make the right use of instincts, but I would not commit myself to this definition.

We have to consider intelligence in its relation to instincts. When we discuss animal psychology, we shall see that, as we come up the scale of animal life, we find, near the top, traits that closely resemble human insight and intelligence. Before I attempt to give you a definition of intelligence, it may help if we consider the methods by which intelligence is measured. These are known as 'testing', and involve the working out of tests of various kinds.

The French psychologists Binet and Simon were the pioneers in this field, others have continued their work until it has become a well established science. Very detailed methods have been worked out. The principle is to find tests that can be passed by the average child at various ages. This may sound simple, but to ensure a high degree of accuracy many thousands of tests have had to be devised and applied experimentally to thousands of children and adults.

The present testing system has been exhaustively used and found reliable. It is constantly in use and, while it would not be true to say that it functions perfectly, the margin of error is constantly being reduced. Another fact that has to be taken into account is that emotions may disturb the person who is being tested and thus affect the results. An experienced tester, however, knows how to make allowance for such interference.

It may clarify our point if we take an example of an eight year old child whose intelligence has to be tested. If he passes the tests for his own age we go on to the next and so on. If he only passes the test for eight year olds, we say that he has a mental age of eight. If he passes the test for ten year olds, then we say that his actual age is eight and his mental age ten. In order to express our findings in a commonly understood formula we work it out in the following way:—

$$\frac{\text{Mental age} \times 100}{\text{Actual age}} = \text{The relation between actual and mental age in percentage.}$$

In the case of a child of eight who has passed the tests for children of ten, it means :—

$$\frac{10 \times 100}{8} = 125.$$

The resulting figure we call the intelligence quotient.

The following table will give you an idea how this works out in practice, though I must make clear that the figures given are only an approximate classification, since conditions vary with time and place. I should also like to emphasise that intelligence testing estimates only one facet of the general make-up and that people with a comparatively low I.Q. very often do efficient and valuable work due to other qualities they possess.

Intelligence quotient of more than

120	—	Grammar School Standard.
115	+ —	Other forms of advanced education.
85	+ —	Less advanced forms of secondary education.
70—85	—	Dull and backward.
Below 70		Children in need of special education.

To return to our child of eight. We find that if we test the same child again at the age of ten that his mental age is twelve and a half and at twelve we find a mental age of fifteen which means that all the time the intelligence quotient is the same, one hundred and twenty-five. This is the rule and not the exception.

It may strike you as strange, and you may ask, if the child's intelligence has not in fact increased. Has he not developed his gifts during the years from eight to twelve? Naturally the child's intelligence has developed. Everything in body and mind grows and so does intelligence. What has not changed is the relationship between the actual age and the mental age. The intelligence quotient has not changed, it is constant within the same individual. If a child starts off ahead of his contemporaries he keeps this advantage. The fact to be remembered is that the tests show ability, not achievement, and the ability is constant in relation to the age.

The explanation is to be found in the fact that ability is inborn and grows with the person. The brain of a small child is different from that of a fully developed adult, and the abilities measured by the tests are obviously correlated with the development of the brain, therefore as the brain develops the abilities develop with it.

This raises the whole question of the importance of heredity and you may say if ability is inborn environment plays a part in the development of intelligence. Certainly it is of some importance, but experiments have shown that here heredity is the most influential factor. Education, too, is of some importance in the development of intelligence, and could be said to provide the appropriate environment in which the innate intelligence can reach its maximum effectiveness.

It is possible to give intelligence tests to very young children and tests show that intelligence continues to develop until about the age of sixteen, when it remains constant for the rest of life, or at least until very old age. Organic illness may cause deterioration and older people tend to lack memory. It has to be remembered too, that though the actual intelligence does not develop after sixteen, yet knowledge and experience play a great part in shaping it and determining its usefulness.

Perhaps we are now in a better position to attempt a definition. I think it can be said that intelligence is the inborn power of adaptability and the capacity for relational thinking and acting; to use a popular phrase 'getting the hang of things'.

This lecture has brought us into the field of experimental psychology. This is the science that is concerned with observing ways of behaviour, and, as its name suggests, it is based on the results of experiments which have been made. These are of all kinds and they are carried out with meticulous accuracy. An American psychologist, Gesell, published some interesting experiments on children. In order to help his observations he constructed a room using material that made it possible to see in but not to see out. It was thus possible to watch children who were quite unconscious of being observed. Testing is a product of this branch of psychology.

Many workers prefer experimental psychology to all other forms because it is an objective method of observing and recording facts, but even here the human element is present in the person of the observer. However, compared with modern medical psychology, which we shall discuss later, it is impersonal,

ANIMAL PSYCHOLOGY

This lecture will deal with animal psychology, which interests us as a field of research for human psychology. The activities of human beings are extremely complex, human behaviour is made up of reflexes, instincts and intelligent activity, all closely interwoven. In the field of animal psychology we can observe the working of reflexes and instincts in a relatively uncomplicated state and studies in this sphere help to throw light on the problems of human psychology.

If you are in doubt about the validity of the comparison between animals and human beings, I must refer you to the works of Darwin. Psycho-analytical studies have also shown that primitive instincts underlie our ordinary behaviour and come to the surface in special circumstances.

If we consider some examples of animal behaviour, we shall see how instincts function and how far modification of instincts is possible.

Think of a hen eating corn. The hen sees the corn and picks it up. This is a simple reflex, the hen sees the food, the eyes cable to the nervous system, the appropriate movements are initiated and it starts to eat. The same reflex action takes place in the case of a bird eating a worm, but not always. If the bird has young ones it will not swallow the worm itself but will carry it to them. Here we see a reflex modified by instinct. In the case of a hen that has hatched and reared several broods of ducklings and then rears chicks, we find that she will expect the chicks to take to the water. This shows that an outside factor has brought about a limitation of the instinct.

The mating of birds is another example of instinct at work ; in this case a whole chain of development has to be worked out in sequence. Suitable territory has to be found, a mate to be chosen, a nest built and then breeding starts. All this invariably takes place in the spring, though some experiments were made in Canada, keeping birds in heated and sun lighted rooms. Under these conditions they started breeding in January. This is another example of modification of instinct by an outside factor.

The migration of birds is obviously the working of an ex-

tremely powerful instinct which is, at present, beyond our understanding.

In some cases it is possible to improve an instinctive function. All birds sing by instinct, but it has also been observed that singing is improved by practice and imitation. As you know there are canary breeders who bring up birds to act as singing teachers. Here the instinctive function is greatly developed and improved.

Forms of play among animals are an interesting study. Play occurs when the animal goes through a period of infancy, but this only happens in the higher animals and is nearly always a preparation for adult life. A kitten playing with a ball is practising to catch mice. Sometimes, however, it is just an outlet for abundant energy.

You all know the possibilities of training animals, which can produce some amazing results, but there are always limitations.

Some of the most famous investigations with animals have been Koehler's experiments with apes. Koehler spent several years in Teneriffe where he made an intensive study of the behaviour of apes; the results of his experiments have been extremely interesting. Apes clearly have insight and can size up a situation and deal with it in a way that demonstrates a certain amount of understanding. When food was placed out of reach, it was found that they learned to pile boxes on top of each other and climb up in an attempt to get it. Here, however, the limitation of their powers of reasoning became apparent. They never learned to pile up the boxes in such a way as to make the pile safe - bigger boxes at the bottom - they always piled them haphazardly with the result that they often collapsed.

Dogs too are capable of responding to intensive training and often demonstrate a similar kind of understanding. They will work out a roundabout way of getting at food if the direct way is barred, but here, too, the response has its limitations.

There are plenty of examples of social life among animals. Many wild animals live in herds with leaders, and among insects we find that bees and ants live in a highly organised state.

Swans give us an interesting example of family life. They are monogamous and are faithful to each other throughout life. Each family has its nest, they are extremely jealous of their territorial rights and are likely to attack anyone who comes too near.

INTRODUCTION TO PRESENT DAY PSYCHOLOGY

Birds have a varied pattern of social life; some are monogamous whilst others have harems and live in communities. The fact that emerges from a study of all these forms of social life is that they are not entirely dictated by practical considerations but arise out of an innate tendency for social living. We find too that there are the leaders and the led, the bullies and the bullied, among animals as everywhere else.

That animals have emotions is obvious. They express anger and fear, love, hatred and jealousy. They do not laugh, though Koehler maintains that apes can show an expression very similar to human laughter. There are various methods of communication among animals. Some can be heard by human beings but there are undoubtedly other methods, for instance smell is a means of communication. The so-called ecological sense is very well developed in animals; they know exactly where it suits them best to settle down.

This very sketchy outline of animal psychology was only supposed to illustrate that one can differentiate between several classes of animals. Some react mainly in the way of reflexes, others show instincts at work which are increasingly operative the higher up the scale the animal is. We also saw adaptability to environmental conditions in a varying degree and real insight and intelligence.

CONDITIONED REFLEXES AND BEHAVIOURISM

Pavlov, a Russian research physiologist, devoted much time to the study of the digestive organs, and most of his experiments were connected with measuring the digestive functions of dogs under special conditions. As you know the sight of food causes a secretion of saliva in the mouth. Food was produced and coinciding with the production of the food a bell was rung. The sight of the food caused the secretion of saliva in the dog's mouth. This was repeated for a number of times; then the bell rang but no food was produced, and it was found that the sound of the bell had produced the saliva secretion although the dog had not actually seen the food. The first reaction – the natural stimulus – was called an unconditioned reflex, and the second a conditioned reflex.

These experiments were conducted very thoroughly. Bells of various tones were used and Pavlov discovered that the dog's range of tone differentiation was very acute and went as far as one eighth of a tone. This means that one eighth of a tone decided whether or not the reflex took place.

Krasnogorski carried through similar reflex studies with children by showing them chocolate. This made them open their mouths. At the same time he touched their arms. After many repetitions he touched the arm without showing the chocolate and immediately the mouth opened. The reflex was artificially conditioned.

From these experiments Pavlov and others worked out a comprehensive theory which postulated that all mental activity in animals and in human beings can be seen as reflexes. Naturally this theory involves more complicated reflexes than the one I have just mentioned. It is maintained that reflexes are connected with each other in chains, which respond to stimuli from outside and inside and that this covers the whole range of mental activity. The differences between the conscious and unconscious mind are not taken into account at all, it is held that the key to all knowledge is the reflex.

This school of thought has been responsible for the emergence of what is known as behaviourism, which has many adherents,

particularly in America, J. B. Watson, its principal exponent, has carried through thousands of experiments, especially with children, and published a series of very valuable books on the subject. He has tried to differentiate between primary and secondary reaction patterns.

It was found that infants at a very early age show fear, anger and love, the fear usually being connected with loud noises or disturbances of the bodily balance. Watson made clear that the infant's fear of a dog has nothing to do with the appearance of the dog, but only with the noise it makes. He showed a dog to a young child who touched the animal without fear; then he introduced the dog, and at the same time there was a loud noise. If this was repeated the dog and the noise became associated in the child's mind and fear of the dog was aroused.

Other experiments were carried out, but there was always a tendency to group as many features as possible under one heading, and to trace back behaviour details to a few innate patterns. But reflexes do not represent the only important behaviour pattern. Just to give one example, human behaviour as well as that of animal's displays persistency and variation, two characteristics which are not found in reflexes.

There is therefore considerable disagreement on the conclusions drawn from these experiments, which tend to over simplification. By all means let us simplify our classifications as much as possible, but it must be remembered that even a master key does not open all doors.

Nevertheless we recognise behaviourists have made a very valuable contribution to modern psychology.

GESTALT THEORY

Another theory to which some psychological workers subscribe is one which postulates that the situation as a whole is the important thing. This is known as the Gestalt theory, Gestalt when translated means configuration, and it is held that the sum of the parts do not equal the whole when looked at psychologically and, therefore, it is the complete situation that has always to be taken into account.

For example, consider a spider and a fly, the fly is of no importance to the spider when it is outside the web. The combination of the spider and the web make the unity that is of significance. In the same way, a wasp will take its prey to the nest, will leave it outside and go inside itself and will then return and take it inside. All these actions have to be performed in the same sequence every time. If the prey is removed while the wasp is in the nest it does not learn not to leave it outside, but will repeat the same process every time. This shows a limitation of instinctive behaviour, but it can also be argued that the wasp can only see the situation as a unity. If the parts are changed the whole situation is different.

It is interesting to observe how this theory operates in relation to human beings. If a child learns to play the piano, it is usually very bored when it has to practise nothing but scales, and some teachers have found that it is wise to give the child whole pieces of music to play at the earliest possible moment so that an idea of the whole process may be shown.

Or again, think of children who have had to read a Shakespearean play, line by line. It has often spoiled their appreciation of Shakespeare for life. Nowadays, children are taken to the theatre to see the play acted, or they act it themselves, and seeing the thing as a whole makes all the difference between boredom and appreciation. This is one of the cases where psychology has had a beneficial influence on methods of teaching.

I hope these very elementary examples have given you some idea of the complicated theory of Gestalt-psychology. I am afraid there is not time to make the intensive study which would be necessary if we were to understand it fully.

CHILD PSYCHOLOGY

Child psychology, like animal psychology, provides us with an opportunity of observing psychological activity in a relatively uncomplicated state. In infancy the individual follows the pattern of the species – in technical terms – ontogeny reflects phylogeny.

Research workers of all kinds, physiologists, experimental psychologists and pediatricians have devoted time and study to the behaviour of children. In recent times modern medical psychology has also made a thorough study of child behaviour. It would be true to say that without it the study and understanding of adult psychology is impossible.

Before the progress of a young child can be assessed it is necessary to know the different stages of child development. You all have some idea of the standard of behaviour expected from a boy of fourteen in contrast to a child of nine, but to judge young children is much more difficult, and experience is necessary before one can assess the development of a child during the period one month to two years. The general outline of development for the normal child is as follows :—

First month – Reflex level, sleeping, drinking, crying.

Second month – Slight turning of head towards noise.

Response to attention (calming down if attended to).

Reaction to discomfort (if napkin folded too tightly).

Third month – Looking round if carried about.

Follows movements.

When lying on abdomen lifts head.

First response to laughing.

Makes inarticulate sounds.

Fourth Month – Looks for source of sound.

Takes finger of adult.

Follows a moving object.

Holds rattle.

Strong movements of arms and legs.

When lying on abdomen, lifts up both head and shoulders.

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- Fifth Month** – Lies on abdomen supported only by hands.
Eyes follow moving person.
Holds objects firmly.
Differentiates between coloured and uncoloured objects, shows greater interest in coloured ones.
Stretches out arms towards object.
Moves toys about.
Expresses emotions distinctly – happiness, anger and laughter.
- Sixth month.** – Differentiates between objects themselves (between bottle and stuffed animal).
Grasps things with one hand.
Lifts head when lying on back.
Responds to friendly and unfriendly facial expression.
Expresses discontent if toy is taken away.
- Ninth Month** – Sits without support.
Attempts to get rid of napkin.
Crawls.
Attempts to draw attention of adult.
Eats with spoon.
Learns to repeat a process.
- Twelfth Month** – Opens box.
Pulls string to bring an object nearer.
Stands with support.
Finds an object if hidden behind screen.
Speaks two words.
- Two years** – Motor system is functioning – can walk and run.
Builds tower out of blocks.
Draws horizontal and vertical lines, in imitation.
Speaks, using sentences.
Adaptation – arranges blocks in a line, folds paper if shown how to do it.
Social behaviour – talks about incidents, listens to words, explains pictures.
Emotional behaviour – reacts to different orders, shows definite individuality in protesting against some things and wanting others.

The best way to understand the progress of the child is to look at it as we look at a house that is under construction. At a certain stage it is possible to see the various sections in different stages of development. Everything has to come in proper sequence, for instance plumbers before painters. So with children, at different ages their various trends are in different stages of development but all are growing, though not at the same rate. It is this all important factor of growth that must be borne in mind when considering the psychology of children.

When comparing adults and children it is amazing how often the fact is overlooked that, whereas in adults the emotional and intellectual life has taken definite shape (though it may still be liable to a certain amount of change), in children everything is in a state of flux. Nothing is finally settled; what is valid to-day may be forgotten to-morrow. Growth and development are going on all the time and this must be considered.

It is certain that in child development there is a comprehensive plan that works as surely as in house construction. Who makes the plan? Here one may speculate. You may call it God or biology; the psychologist sees it working and studies its details but within the scope of his work is not concerned with the question who evolved it or put it into working order.

PLAY

When we were studying animal psychology we found that all animals that passed through a period of infancy indulged in a form of play that prepared them for life. In principle we may say that the same is true of children, though the child's play is necessarily more complicated. Children do not have to learn to hunt and kill, they have to learn to take their part in adult life with all its varied activities.

Play is not peculiar to childhood, it starts as early as physical conditions permit and ends in old age, but in childhood it represents both work and relaxation. It is important that we should understand the child's play because this will throw light on the child's problems. Though play is a spontaneous activity it can only function under the right conditions, and we have to find out what those conditions are.

Let us consider what play means to the child. As soon as it

can use its arms and legs freely, play begins. No toys are necessary because in this early stage the baby plays with its own body. It plays with its fingers and tries to put its big toe in its mouth, and after a time succeeds in doing so. All this takes place before the sixth month.

As soon as the child can sit up, its range of activity increases. It can look round and take things in its hand, it learns to move a rattle and enjoy the sound produced. The standing and walking stage bring even more possibilities, just the enjoyment of its own powers of movement is a fascinating form of play. One could summarise by saying that play in young babies is concerned with bodily control and physical movement.

As mental life goes on play becomes concerned with other things besides purely physical activity. The child's intelligence is developing and play provides the tools with which it can practice. Intelligence cannot develop in a vacuum, it needs contact with people and objects, and at this stage the child becomes aware of the people and objects around it. It is here that toys begin to play a part and the child will build towers with blocks, form patterns and make bridges, etc.

It is not only the intellect that grows, emotional life develops at the same time. Love and hate, jealousy and other emotions come into the picture. Think of little girls playing with their dolls. They dress and undress them, they bathe them, they punish and teach, quarrel and effect reconciliations with them, in short the whole scale of human relationships is practised in play. Boys too have their games in which they imitate adult life. Play in this form is very useful and often offers a natural safety valve for emotions.

Play is based on fantasy and in children fantasy and reality are very close together. A doll is a living person for a child, a row of blocks is a train and they are often surprised that the fact is not immediately apparent to adults. If, however, the blocks suddenly turned into a train the child would be very surprised. Despite the close connection between reality and fantasy in the child's mind there is, at the same time, a strong grasp of reality.

The importance of fantasy in adult life cannot be too strongly stressed, without it we should have no music or poetry or painting. It is clear however that, except in art, it is reality that plays the major part in adult life whilst fantasy operates in a

restricted field. In childhood, the proportion is different, the younger the child, the more fantasy dominates his life and as he grows, the influence of reality extends.

Play is of value in helping the child to fit into practical everyday life. Habits are formed and practised in play. Girls learn how to look after children by playing with dolls. Cooking, washing and sewing are learned partly through play. Boys too, though not noticeably given to washing either in play or reality, get acquainted with tools and make things at first in play, but eventually achieving practical value.

Playing schools is often very popular, and this is interesting, since it often reveals what the children think about school.

Play teaches children to become, on the one hand, more independent, and on the other, more sociable. They learn to make friends with each other and to know the advantages and disadvantages of companionship, and they often accept correction much more easily from other children than from adults.

The first materials that children require for play are simple, just plain little wooden blocks, then come rattle, stuffed animals, coloured blocks and similar objects.

In the child's early years it is learning to make certain adjustments to life; play can help in providing an outlet for the emotions that are often aroused. If a child has to learn that he must not make a mess in the house, how useful it is if there is a sand pit and water where he can make a lovely mess without causing trouble. Water and sand are very valuable playthings, the child learns to construct things in sand, and this teaches him to use his hands. Plasticine modelling too is very good for children and helps to develop their sense of form.

Drawing and painting are another useful outlet for emotions. Prevented from drawing on the wall, at least it is possible to draw on paper and make pictures and colour them. As children grow older more complicated toys are in demand, boys like mechanical toys and girls miniature cooking sets, and from these toys hobbies develop which also help the child in facing its problems.

The pleasure of movement continues to play a great part in the child's activity; all children like dancing and are responsive to rhythm at a very early age, and this is a fundamental response. The two elements in rhythm are space and time, these, brought together, in continuity and repetition, form a pattern. This pattern is not confined to music and art but governs our

life. There is periodicity and repetition everywhere, but repetition by itself is not rhythm. Rhythm is the fusion of traits into a whole, the co-ordination of movements into a continuous flow wherein repetition is an important factor. Is rhythm inherent in everyone? It is in some ways, because it is one of the essential characteristics of life but there are different degrees of rhythmic endowment. Rhythm should play a great part in children's play, swinging, dancing or playing a musical instrument help to develop it, and the child who develops his rhythmic feeling in play will find his rhythm in life with greater ease.

Another form of play is acting, children develop an interest in acting at a very early stage. Here fantasy and rhythm are the great essentials and the acting develops as the child grows older. It may be Red Indians, it may be gangsters, it may be in performing real plays but always in acting fantasy can work and find achievement. There are hardly any children who are not interested in acting at some time but, like all activities, it does not interest all of them to the same degree and does not keep the interest at the same level all the time.

As in other subjects of research, many theories on play have been put forward. Some people believe that it has no other function than to serve as a preparation for life, others think that it is merely an outlet for superfluous energy. I have put before you some of the aspects of play, but there are others which I am sure you will be able to provide from your own experience.

Before we leave child psychology, I think I should deal with one or two problems that arise in dealing with children. First, there is the question of outside stimuli. Many parents are doubtful as to the amount of stimulus that it is wise to provide. Should children be taken to the theatre or the cinema? Should they be allowed to go to restaurants, etc.? The answer in every case depends on the child, but clearly the stimuli from outside must never become overwhelming. A child can create a stimulating life from his own imagination. A dull, slow, heavy child obviously needs more stimuli from outside than the hyper-sensitive child. Needless to say if ever a child is taken to the theatre or cinema the performance must be carefully chosen. A cheap thriller could have very bad effects on a child's imagination.

Similarly with books. All children love stories and the best

kind of children's books are much in demand, but care in choosing them is essential; considerable harm can be done by unsuitable books. It is not a good practice to tell children stories before they go to bed; the imagination is stimulated and nightmares may result. Another point that has to be taken into consideration is the child's tendency to feelings of guilt and fear. A story often has a moral, and this is a good thing, provided that it is not emphasised in such a way as to arouse in the child excessive feelings of guilt and fear which may hamper normal development. In choosing books for children, as in so many other things, the middle way is best.

Animals as pets often provide a child with companionship, and the care of them helps to develop a sense of responsibility.

As the child grows older it develops a craving for independence and this should be gratified within reasonable limits. Camping, combining as it does, change, movement and independence, is often popular and should be encouraged.

Sex plays a part in the choice of games. Broadly speaking, it could be said that boys show a greater preference for games involving initiative and physical activity, whilst girls tend to less active forms of play. This is in accordance with the general difference between the sexes. In young children it is found that they prefer playing with children of the same sex, partly because they share similar interests.

It is noticeable that where a number of children play together one or two tend always to take the lead. It is likely that the leadership may vary according to the requirements of the game, whether technical ability or mental ability is required. But one can see that certain children are leaders and play gives them training for leadership in adult life.

Play reflects the whole of the child's life and it is used in dealing with psychological difficulties, both as a method of diagnosis and as treatment.

Team games are useful in developing a spirit of co-operation and in teaching children to be good losers. Forms of play continue into adult life, and the fact that in England games have been so important a part of national life has probably been immensely valuable.

This brings us to the end of child psychology for the moment though we will return to it later. In the meantime we have to consider other fields of psychological interest.

CHARACTER FORMATION AND STRUCTURE

In studying character formation and structure, we have first of all to define character and its relationship to temperament. When we talk of a strong character we mean strength of will, but when we talk of a good or bad character we mean moral strength. Psychologists use the word in a wider and more neutral sense, as the individual unity of the different inborn and acquired qualities of the mind. I stress the words 'of the mind' as character does not include physical qualities although it is recognised that mental and physical qualities are closely related. The development of character is determined by many factors, inherited and acquired influences, physical and psychological elements, experience and environment, all play their part.

Temperament is the part of the character mainly concerned with emotions. It governs the speed of responses – psychomotility – and determines the degree of sensitivity. Intelligence, too, is a part of the character.

Having defined character, let us first of all consider the relationship between psychical and physical qualities. Psychical qualities have always a physical correlate, and notwithstanding our definition of character as that part of the individual which contains the psychical qualities it also has its physical correlate.

The interaction of mental and physical states is clear if we think of the effects of fear. Fear is a mental quality which has physical effects, it can be seen in pallor and trembling, and will cause perspiration. Rage makes the face flush, worry makes us cry. The action of the mental state upon the physical can be clearly seen. The process also works the other way round. Gallstones and jaundice can cause mental depression. There are many examples of this interaction in everyday life. Whooping-cough is a physical illness, an infection. But the mental make-up plays a great part in deciding the number and intensity of the attacks of coughing. Placid children have less frequent attacks than those who are excitable and highly strung. Even the duration of whooping-cough is determined by mental conditions.

I have mentioned the fact that character traits can be discerned in very young children. This being so, it is clear that these cannot be accounted for by environmental influence, which brings us to the important and complex problem of heredity. We are indebted to the pioneers of biology for the discovery of laws of heredity and to Mendel in particular. In 1866 Mendel published a work on the laws of development. Later Darwin published his works on natural selection and the survival of the fittest. It was only in 1900, however, when Mendel's works were rediscovered, that modern biology began to take shape. Julian Huxley recently described our present knowledge in working out a synthesis between the different trends of thought. There is no doubt about the validity of the theory put forward by Mendel on the working of the laws of heredity. But, whereas Mendel worked on peas, psychologists have to operate in a much more complicated field. Indeed so complex is the sphere of human development that it is extremely difficult to separate the different trends. We know that certain cells contain the hereditary factors. These are known as chromosomes, and it is now possible to explain why some people have blue eyes and some brown. It is, however, quite a different matter to determine the hereditary factors in the mental make up.

Another complication is added by the fact that the so-called social heritage has also to be taken into consideration. This is the sum of cultural institutions, ways of life, climate and other factors that have formed the pattern of life of preceding generations. They have a far-reaching influence on the individual.

It has also to be remembered that every individual has an inheritance from each of his two parents, who in their turn inherited different trends from their parents. This brings into the picture four more people who may have had an effect on the individual's heredity. As you will see it is extremely difficult to trace the laws of heredity in human beings with anything like clarity.

Educationalists and psychologists are equally interested in the relative importance of heredity and environment in the development of the individual. If all character was inborn clearly environmental influence would not be of much importance, but this is demonstrably untrue. Inborn potentialities cannot be realised unless the environment is favourable.

There is a constant interaction between inherited and acquired

qualities. The relative strength of the influences cannot be measured with any certainty. Interesting experiments on this subject have been carried out with identical twins, who are brought up in different environments.

ENDOCRINE GLANDS

We are now going to consider a system which forms a link between the physical and mental sphere, the endocrine glands. These are glands that produce secretions into the blood and these secretions have a great influence on our physical and mental life.

I will mention only the most important of them. To begin with the pituitary gland. It has been said that the endocrine glands are like an orchestra and the pituitary gland is the conductor. It is situated between the roof of the mouth and the brain in the so-called Turkish saddle - in Latin, *sella turcica*. It is divided into two parts and has many functions.

The anterior part of the gland influences the growth of the bones and the sex organs. Over-activity of this part leads to abnormal height and premature sexual activity. Under-activity has the reverse effects, many dwarfs suffer from under-activity of this part of the gland.

The posterior part is connected with the circulation and blood pressure. It plays a very important part. It has also definite connection with the muscle in the uterus. An injection of this product accelerates the birth by leading to more powerful contractions of the uterus. The significant part of its activity for us is that it has great influence on character and temperament.

Another important gland is the thyroid, which produces the so-called thyroxin, a substance which can be produced synthetically. The best way to illustrate the influence of this gland is to look at extreme cases of over and under activity. Under activity produces cretinism, a state of mental deficiency. It is possible to some extent to counteract this state by small doses of iodine. Iodine is a component of thyroxin and given in small doses over a long period it can reduce the gravity of the symptom.

Over-activity of the thyroid gland produces so called Basedow's disease. In this case the enlarged gland can be seen and is called a goitre, though not all cases of goitre are due to this cause. Other symptoms go with a case of Basedow's, such as

protrusion of the eyes, excitability, restlessness, and pulse acceleration.

The amount of thyroxin produced decides whether the individual will be dull or vivacious, slow or quick.

The thymus is another gland of importance, it is usually more developed in young children and is concerned with the development of the reproductive organs.

The pancreas gland governs the blood composition and is responsible for the sugar chemistry of the blood. The familiar insulin has been developed from some parts of the pancreas and is widely used for curing diabetes, an illness in which the sugar production is disturbed. The pancreas also has functions connected with the digestive processes.

The sexual glands are of great importance, and are responsible for the development and co-ordinated functioning of the primary and secondary sexual activities. The primary characteristics are the development of the male and female sex organs. The secondary characteristics are, in boys, change of voice, growth of hair, in girls development of breasts and hips. The whole sexual cycle, menstruation, ripening of the ovum, etc., are under the influence of endocrine glands. Many psychic qualities are connected with these functions. Difficulties in girls during menstruation, climacteric disturbances and many other symptoms have their origin here.

PHYSIQUE AND CHARACTER

In this lecture we shall be considering another link between the physical and the mental life of man. Kretschmer, a German psychiatrist, conducted an exhaustive study into the relationship between physique and character. He published his findings in a book entitled *Physique and Character* and his work has had a great influence on modern psychological thought. Kretschmer found a certain correlation between physical types and mental states. I cannot go into his theory very fully but I will try to give you the main ideas.

We will consider first the mental aspect. There are two main groups, the schizoid and the cycloid. The word schizoid comes from the Greek and means split, cycloid means circle. Within the cycloid group we find the gay chatterbox, the humo-

rist, the quiet even tempered man, the man who takes life as it comes and enjoys it, the practical person and the person who makes the best of every situation. In the schizoid group we find the sensitive, easily excitable person, the cool master of a situation, the detached man, sometimes the hostile crank and the hermit. Generally speaking the types fit into Jung's classification of the extravert and introvert.

The two names, cycloid and schizoid, are taken from two main mental illnesses. Manic depressive disorders go in circles. Times of elation and vivacity follow periods of depression and apathy. The same sequence of mood can often be observed in normal people though to a much smaller degree. You will have noticed that some people vary considerably in their state of mind, sometimes they are full of interest and at other times listless and apathetic. They fall within the cycloid group, but their changes of mood remain within the normal range.

The name schizoid denotes a split, and schizophrenia is often called split personality. People who suffer from it are often conscious of the conflict within them. One of my patients jumps up during a discussion and says in despair, 'There are two parts in me, one wants to go in this direction and the other in the opposite, I cannot settle down to anything because of this conflict'. Schizophrenia is a very complex form of mental illness. One can find the same conflicts, only much less pronounced, in normal people. There are those who find it difficult to make up their mind and live in a constant state of indecision. Often they turn in upon themselves because of their conflicts and become isolated.

I should like, however, to impress upon you at this point that not every conflict means a split mind, and indecision is very rarely a sign that schizophrenia is imminent.

The division of people into cycloid and schizoid types does not, fortunately, mean that everyone in the group is liable to the corresponding mental illness, but it does decide, if the person becomes ill, what form the illness will take. People usually have the mental illness to which their character disposes them.

Now let us discuss the physical side of Kretschmer's theory. He found a correlation of physical characteristics with the two mental types that I have mentioned.

Cycloid people usually belong to the so-called pyknic type, whose physical characteristics are roundness and a tendency to

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fatness. The face is rounded and soft and the profile straight.

Schizoid people are divided into three physical types.

The asthenic, characterised by narrow shoulders and great height, long limbs. Thin and flat chested. No fat. Angular profile.

The athletic, strong skeleton, powerful muscles, large hands and feet.

The dysplastic includes too many mixtures of physical characteristics to be dealt with here.

It must be remembered that both these groups include normal and abnormal people, and the fact that a normal person belongs to a certain group does not indicate a possibility of potential illness.

There are difficulties in grouping people. Pure forms, textbook cases, are in the minority, the majority offer a mixed picture. If we remember the laws of heredity we can easily see that the individual product of two parents and many ancestors may have inherited various physical and mental qualities in different combinations. Research work into large families has shown that members of one family reveal all possible mixtures of character and physique in the single individual, schizoid physical type with cycloid character and *vice versa*. Women are more difficult to classify than men owing to a greater softness in outline both of physique and character. Children, too, show very few pronounced characteristics, because their mental and physical traits change to a large extent during the process of growth. Racial factors play a considerable part in physical make up.

Though Kretschmer has made the most important contribution in the field of physique and character, other psychologists, Jung in particular, have also done valuable work.

ENVIRONMENTAL INFLUENCES

The mother has naturally a great influence on the development of the young baby; she is in constant contact with it and it is entirely dependent on her for food and warmth. If she is calm, quiet, well balanced she will create the right kind of atmosphere. The young baby needs quietness and gentle handling and it also wants to be left alone sometimes. There are mothers who do not realise this and want to be doing something for it all the time.

The form of feeding is very important. The baby who is breast fed starts off with an advantage from every point of view. Except in rare cases the mother's milk is the best food for the child, and the relationship established between the mother and the baby by breast feeding is of psychological importance. Wherever breast feeding is possible it should be done. There are cases where this cannot be managed and here the mother can, by taking extra care, compensate for this lack by other means. The fact that I stress the importance of the mother in the early months does not mean that there is nothing left for the father to do. He can help in creating the right atmosphere, he can help to run the house to enable the mother to spend more time with the baby. There are sometimes cases where the father feels frustrated and jealous, and is not willing to share his wife's love with the child.

As the child grows the influence of the whole family becomes more and more of importance. The way they live together, the interests they have, the love they spread, all these factors play their part in character formation. If there is unhappiness, restlessness, if the home is broken up, the child feels insecure and nervous symptoms may develop. On the other hand, an atmosphere of warmth and friendliness combined with quietness and balance will provide the child with the best basis for developing his own personality.

The growing child gradually creates his own social circle, he makes friends and plays games. All these influences help to form character. In only children, very close friendships often replace the influences which otherwise would be exercised by brothers and sisters, and these friendships are of the highest importance. They are often a strong formative factor.

There are several critical periods in a child's life when problems and difficulties arise and a crisis may develop. Kindergarten age often brings difficulties; puberty is another critical period. Parents need to exercise a considerable amount of tact and understanding; failure to act wisely at such times may produce lasting results.

School, naturally, is an important influence since the child spends a considerable amount of time there, whether as a day pupil or as a boarder. The personality of the teacher influences the child's character not only by teaching, but by practical example.

After school the occupation, the kind of work and the people with whom the child works also contribute to the formation of his character.

Another important environmental influence is, what I described in an earlier lecture as the social heritage. From birth onwards its influence grows rapidly; the social institutions and the structure of community life have a great bearing on the child's development because of the constant interaction between the life of the individual and the conditions of life in the community.

PSYCHOLOGY OF THE UNCONSCIOUS

We have approached psychology from different angles and this lecture brings us to the focal point of our science. We are going to discuss psycho-analysis, a method of treatment worked out by Sigmund Freud which has not only influenced modern psychology but has been of value to many related sciences. It is not exaggerating to say that many of the analytical findings have become part of our everyday life. On the other hand it cannot be denied that psycho-analysis is still opposed by many psychologists and research workers, though opposition is concerned with denying the generalisation of some claims of the analytical school rather than its principles.

Freud was a genius; he was responsible for the working out of the entire system. Naturally there are mistakes and exaggerations; Freud himself was quite aware of its imperfections, but the main basis of his work is now established beyond doubt. He revolutionised psychology and can be said to have made the greatest individual contribution to the science.

When the Nazis came into power they condemned psycho-analysis as a Jewish science and Freud's books were publicly burned. The analytical societies were closed and it took considerable ingenuity to keep the work going under societies with different names. Only Aryan doctors were allowed to practise. In this way the founder of the whole system was excluded from his own realm. Freud's books were not totally destroyed, translations are available in every free country. England welcomed Freud and provided him with the means of carrying on his work.

Even a genius has to build on a basis prepared by others and Freud had forerunners who worked on lines similar to his own. During the last twenty or thirty years of the nineteenth century several French scientists made a study of hypnotism, and it is with hypnotism that we must begin if we want to understand the origins of psycho-analysis. Psycho-analysis is the psychology of the unconscious, the discovery of the unconscious being the main difference between the old and new approach.

There have been reports recently in the newspapers of hypnotic experiments. To untrained people it probably appeared

as if a new method of treatment had been discovered. This is not so. There has always been an air of mystery around hypnotism; from its earliest days it has exercised an almost uncanny fascination. At one period people who could produce hypnotic phenomena were put on as turns in the theatre, or gave special shows. Then interest waned until some new method brought the subject once more into the public eye.

Mesmer who died in 1815 was one of the early workers, and since that time there has been an increasing interest in the study of the mind and the production of phenomena by special techniques.

Hypnosis is a sleep-like state of mind in which a special connection is established between two people, one gives suggestions and the other accepts them. The quality of suggestion is the basis of hypnosis. What is suggestion? You all know the word, it is in everyday use and can be defined as the communication of thought, opinion or feeling to someone else. This way of communication is different from the normally spoken word. If I lecture I try to give information, to teach, but I would not say that I influence by suggestion. In the sense that I might suggest a book, the word is used as meaning recommendation which is quite different from suggestion in the psychological sense. Psychologically used, the word suggestion implies more drive, and amounts to definite influence.

We sometimes talk about strong suggestions and the degree of suggestibility in various people. We are all subjected to suggestion but people react in different ways. Some people are able to give strong suggestions and others are not. The whole matter is connected with the question of leadership and personality. The more powerful the personality, the stronger the power of suggestion and conversely.

A factor which plays a great part in the giving and accepting of suggestion is imitation. We are all inclined to imitate other people but there are differences of degree. Example is a great influence and this brings us to one of the most important aspects of social life. Everyday life is full of the influence of suggestion and once power is put into the hands of a leader he will exercise this force to impose his will. Mass suggestion is an important social phenomenon.

The power of suggestion can be built up and maintained by repetition. Hitler took exceptional advantage of this fact. The

study of the science of propoganda and mass psychology has been and is a very interesting branch of psychology.

In animals suggestion is seen at work. The whole cycle of leadership and influence, imitation and blind following all combine to strengthen the herd instinct. When this operates in human psychology the results can be disastrous or beneficial, the deciding factors being character and aim of the leader and the state of mind of the mass.

Let us return to hypnosis, which I defined as a sleep-like state of mind in which a special *rapport* is established between two people. Suggestions are made and accepted. The person who carries through the hypnosis must have insight into its processes. Some can learn it and others do not even need to learn, but there must be the innate ability if a high degree of perfection is to be reached.

Hypnosis is a powerful instrument and, like all powerful instruments, open to abuse. The question is often asked, whether it is possible to influence a person to commit a crime. Yes, it is possible, though we think that even in deep hypnosis there is an influence operating from the instinct of self preservation which might prevent this; but there are abnormal people in whom this instinct does not function properly. We have to admit the danger of hypnosis but have not all powerful instruments dangerous potentialities? Think of electricity, fire, gas and aeroplanes.

Another question often asked is, can everyone be hypnotised? Very nearly everyone, though much depends on the technique of the hypnotist and the willingness of the subject.

During the last century some doctors discovered that certain buried incidents could be revived under hypnosis, and on the basis of this discovery they formed a method of treatment for some manifestations of mental disturbance, particularly hysteria. A practical example may help to illustrate this method. A woman patient comes to see her doctor and tells him about a certain weakness in her right arm. It feels weak, and writing is becoming increasingly difficult, in fact any kind of use becomes more and more laborious. This symptom has gradually developed over the last two years and she cannot say how it started. Examination shows that there is no organic basis for the complaint. She is put under hypnosis and during the treatment she remembers a car accident which happened several

years ago and which she had forgotten. As memory returns she shows signs of great emotion, fear and anxiety. She had suffered from minor injury and shock on the occasion of the accident but recovered after treatment and thought no more of it. Some months afterwards the trouble in the arm started and gradually increased. During the hypnosis, the patient revives the emotions which she felt at the time of the shock and this relieves the tension and cures the weakness in her arm. Such a result might be obtained with one hypnosis or it might be necessary to have several.

What has happened here? An accident has produced some nervous symptoms in a way which was not known to the person concerned. She has no memory of the connection between the accident and her symptom. She behaved very well at the time, she did not show any fear or distress, but instead of showing fear she developed a symptom. It may have been pride that prevented her showing fear, she did not want to be thought a coward. Under hypnosis she revives all the emotions she had suppressed, she re-experiences them and clears them up. Once they come to the surface of consciousness she can deal with them.

This is a straightforward example which I use to illustrate the main point. Where were the emotions hidden? The answer is, in the unconscious, that part of the mind which is inaccessible under normal conditions. The suppression of fear and the forgetting of the incident is called repression. This brings us to the question, What causes repression? In this case we mentioned pride. In other cases different feelings may be at work. In general, we say that there is a censor on guard ensuring that certain things shall not come to the surface, where they would have to be admitted by the individual concerned and possibly seen by others. The censor is the part of the mind that is responsible for the process of forgetting or burying the unwanted emotion. The emotion must, however, find an outlet and it does so by taking a different form and becoming the symptom. The symptom is the transformed fear of which pride would not allow expression.

The term repression should only be used to indicate cases in which a process is prevented from directly entering consciousness. The conscious and the deliberate control of an undesirable tendency is not 'repression'.

The conscious and unconscious are two different qualities of

the same mind, different in the way I have tried to show, but belonging to each other. There is a constant two-way traffic between them. Like a pond, there is the surface and the depths, and thoughts and feelings are constantly coming to the surface, but unlike the pond there is a barrier which prevents an easy flow. One way to break down this barrier is the use of hypnosis, but it is not the only method.

It soon became clear that, useful as the hypnotic method was, it was not the solution of all difficulties. All cases were not as simple as the example I have given you. There were often relapses, and the reaction of the patient was not always the same. The hysterical patient was the one to whom hypnosis was most beneficial, but there were many other types of patients, and even though hypnosis helped the person to clear up one symptom, did it help to avoid others? It is quite true that car accidents are fortunately not common occurrences in everyone's life, but there are other difficulties, and in facing them the individual concerned is likely to react in the same way and the trouble will start all over again. In fact hypnosis is more of an evasion than an effective cure, though it is of great use in certain cases, particularly when it is only possible to give short treatment or in cases of short duration.

In view of this Freud tried to find other ways of dealing with the unconscious which would perhaps give him an opportunity, not only of reviving memories but of re-educating the patient.

The working of the unconscious can be seen in everyday life. A mother who is feeding a baby wakes up at certain times without any outside influence. Mothers also learn to differentiate noises while they are asleep and do not wake unless the noise concerns the baby. There are people who can wake themselves up at a certain time if it is necessary. Think of those times when you try to remember a name. Whilst you are trying you cannot do it, but if you relax the effort, the name comes back to you, rising to the surface of your consciousness. There are those slips of the tongue which often reveal the real thoughts; those are occasions when things slip by the censor. Another example is the way thoughts are clarified during sleep. A problem insoluble at night is often resolved in the morning. The thoughts have achieved some order and come to the surface. All this goes to prove the existence of the unconscious.

Freud found the means of access to the unconscious. He first

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worked with Breuer in Vienna. They studied methods of hypnotic treatment and jointly published a book called *Studies in Hysteria*. Later Freud left Breuer and continued his research alone. During the last years of the nineteenth century and the beginning of this one he laid the foundations of his system of psycho-analysis. In 1908 his work had developed so far that the first congress of analysts could be held. In 1910 the international psycho-analytical society was founded. By this time he had many pupils and followers, but it should not be forgotten that the main work had been done and the foundations laid by Freud himself.

Freud discovered that the two main ways of gaining access to the unconscious were free association and dream interpretation.

FREE ASSOCIATION

In my lectures I am following a definite plan. If I want to illustrate phenomena I choose examples which will clarify the points I wish to make. Similarly when we carry on a discussion or tell a story we have a goal in mind and all our words are chosen to help us to reach that end. If we are to be coherent we have to keep to the point, and select the right words to get our meaning across. Free association is characterised by exactly the opposite qualities. There is no goal, no concentration or selection of the right words to express an idea. What happens in free association is just oral recording of the thoughts and ideas that pass through the mind. Thoughts are always passing through the mind, but normally, either by the action of the censor who is constantly on guard, or for practical purposes the thoughts are selected and used only so far as they assist in expressing coherent ideas.

If I talk to you about the work of the unconscious, it would be quite pointless to mention that I had sandwiches for lunch. If I am concentrating on what I am saying the thought of the sandwiches would probably not even cross my mind, but if it did, I should suppress it as being irrelevant to the trend of my conversation.

In free association, I should probably talk one moment about the immortality of man, and the next about some problem connected with my practice, then I might think I would like to

go for a walk, then I should feel the warmth spread by central heating in this room and I would think of the advantages of central heating in general; I might think of reading an interesting book, going to a theatre, of peace and then of a certain incident which occurred many years ago. My thoughts would jump back into childhood and I would remember an incident that happened then.

You will see that there is no conscious selection, thoughts follow each other at random, there is no thread of continuity. What is the good of such a method? The main point is that in this way we do remember things that are stored away. The barrier which normally separates the conscious from the unconscious can be circumvented in this way. We have easier access to the unconscious because the censor is not fully awake, and hidden thoughts and ideas can slip out more easily. The censor is not entirely asleep, he is just drowsy; this state is closely related to day-dreaming.

I hope I have made clear what is meant by free association. The difference between normal day-dreaming and free association is that in day dreaming the thoughts are not spoken aloud. This brings us to some of the difficulties of the method. Patients are not used to allowing their thoughts such freedom and free association is often difficult at first. In the beginning they often say 'I have so many things on my mind, but if I lie down here I feel as though it is a complete blank'. This is a factor known as resistance, opposition to free expression. Quite often it is found that the patient cannot break down this barrier, he fears that he will say things he does not wish to say; in fact, the censor is on guard.

We make ample use of free association in modern psychological treatment and can obtain most valuable repressed material.

DREAMS

Dreams and their interpretation have been a subject of interest all down the ages. So-called dream books enjoy a widespread popularity. The knowledge that dreams reveal hidden wishes and desires has been known for some time, but Freud was the first person to make a thorough investigation of the subject and

he evolved a method which revolutionised modern psychological treatment.

Dreams have been called the royal road to the unconscious. The interpretation of dreams calls for highly specialised knowledge. Long training, care and patience are required. One has to know a person very well before his dreams can be interpreted with anything like accuracy; this makes all amateur activity ridiculous. Dream interpretation is not a game to be played at parties or carried on as a hobby, it should not be used except by the experienced psychologist. In his hands it is of the greatest value, but only there. Irresponsible people can do a considerable amount of harm by dream interpretation.

I will give you some examples which are simple in structure but which illustrate some fundamental facts.

1. A shopkeeper in a little village runs a one man shop and sells articles of every description. The shop is also the village post office. He had a dream in which he owned a large store, something like Harrods' or Selfridge's, and he saw himself buying and selling a fabulous amount of goods. He had nothing to do with the actual selling in the store. He just directed and supervised.

This dream shows the dissatisfaction of a small shopkeeper whose wishes could not be realised. Clearly he is tired of doing all the little things, weighing potatoes and selling stamps. He probably always had ambitions which for various reasons were not satisfied, and the dream shows his desires quite clearly.

2. A civil servant has served his country for thirty years. He is a placid contented kind of man, has a family and is happy at home. He has no great ambitions or, if he had, he has buried them long ago. All was going well until recently when he developed neurotic symptoms. He was restless, could not sleep properly and became dissatisfied with his life. He was about 58. He came for treatment and during this he had several dreams, among them the following : -

He had an argument with his immediate superior, a man much younger than himself. Instead of accepting the criticism he argued the matter, and as the other did not listen to reason he attacked him. He fought fiercely and succeeded in knocking his opponent unconscious. When he saw what he had done, he felt very frightened and woke up in great distress.

This dream shows this placid submissive man, who had been

accepting reproof and criticism all through life, suddenly acting aggressively. The superior who figured in his dream had recently come to his office. He was a man without tact or friendliness and our patient had very much resented his manner. This, together with advancing age, general dissatisfaction and other factors, accounted for the neurosis.

In the dream we see aggression and dissatisfaction hidden for a long time, breaking through and coming out into the open.

3. A woman patient of mine dreams that she comes to my consulting room, but there she finds another woman, younger than herself and very attractive, sitting and talking to me. She feels very jealous because I pay some attention to the other woman who, she thinks, is an undesirable person who does not deserve the doctor's attention. In fact she feels that she should have his exclusive care.

This is a common dream which often occurs during psychological treatment. It shows that the patient wants the doctor entirely to herself and resents other patients receiving his attention. It indicates possessiveness and jealousy.

4. A very well brought up girl, religious, coming from a normal family, is under treatment because of excessive shyness and self consciousness. She is easily embarrassed and if talked to with any severity is reduced to tears. She dreams that she is followed by a man, she tries to run away but he gets hold of her and rapes her.

She wakes up horrified and ashamed because she has to admit that she did not mind being raped.

There is no need to be ashamed of such a dream, it is quite a usual one, and is often dreamed by girls who would not think of indulging in illicit intercourse.

To understand the meaning of the dream it is necessary to know more of the girl's history. She had a boy friend who wanted to make love to her more than she was ready to allow him. She was very fond of him and found it very difficult to resist his persuasion, but at the same time she could not give way because of the strength of her moral ideas. In the dream she was behaving quite differently because the feeling was uncontrolled; there was no censorship and she could enjoy in her dream what she would never dare to indulge in in real life.

5. Now a more complicated dream :

A girl of twenty-five has a love affair with a married man.

She is very highly sexed and has had love affairs before. She comes for treatment because of nervous symptoms, and is in a state of great tension, excitable and easily upset.

She dreamed she was climbing up a ladder with the man with whom she was in love. It was a difficult climb, and she remarked that going up was hard enough but it would be more difficult still to get down. At last they reached an open space but there was no foundation; they tried to reach a house which they could see, but it too had no foundations and was floating in the air. After a long struggle they entered the house; there was a priest inside; they tried to talk to him but he would not listen. She cried bitterly and woke up with a horrible feeling of depression.

This dream describes her situation in exact terms. She climbs a ladder with her friend, but does not reach safe ground, everything is floating, the priest will not listen to her. The idea is that she should marry her lover, but this is impossible. The dream shows the despair and unhappiness of a girl who thinks that she enjoys life. Her unconscious knows better.

6. Here is another dream that shows guilt feelings and depression : -

A mother sent one of her boys to a boarding school. She did this on my advice because she could not cope with him. She was not incapable, but the boy was particularly difficult. She dreamed that she went to Sunday School with the boy when a priest came and took him away. She waited for hours and hours and days and days but he did not come back. At last the priest came out of a room with the boy under his robe; she asked the priest to give the boy back to her but he said he could not do so, he could only give him to his real mother. The priest, by the way, represented the headmaster of the boy's school who was a clergyman.

Here you see feelings of guilt expressed in a dream. The mother feels she has failed the boy and must be punished and what punishment could be harder than to be told that she is not his real mother - the implication being that she has not behaved as a real mother should.

I could go on giving examples, but I think I have given enough to illustrate the fact that dreams are unconscious life. Life without the censor. Wishes can be fulfilled and feelings expressed in dreams as they never can be in reality. There is no

selection in dreams, good and evil qualities are dealt with in the same way. Ambition, envy, aggression, love, guilt and fear are all shown with an absence of moral control.

Dreams make ample use of symbols; for instance the floating house, climbing the ladder, the priest who would not listen. Symbols are used in dreams, as they are in ordinary life, to typify another object or quality, and they are often of the utmost importance. It is usually found that things of a special emotional character are presented in symbolic form, the instinct of self preservation, the aggressive instinct. Love and sex nearly always appear in this way.

Freud has been subjected to a considerable amount of criticism from many different quarters because he laid stress on the fact that, in his opinion, many symbols represented sex in some way or other. This is understandable since feelings which are normally taboo will tend to find their outlet in dreams. Our sex life is under strict rules and is most likely to come to the fore when control and censorship are temporarily lifted.

People who are interested in their dreams are often horrified at the nature of them. They frequently ask 'Which is my real character, the one that everyone sees in ordinary life, or the one that dreams of murder and rape'? The answer is, either. We have to remember that personality is not an integrated whole, complete at any special time, but is always developing from level to level, changing and growing. Dream life shows the child in us, we behave in dreams as we might behave in an emergency in ordinary life, forgetting all that we have learned and reacting in a primitive way, allowing emotion to get completely out of control.

It would obviously be wrong to say that the girl who acts according to her moral principles despite the persuasions of her boy friend is not behaving like her true self. She is, and probably no other course of behaviour would be right for her, but this does not obviate conflict, and it is the conflict that causes her dream to take the form it does. The dream acts as a safety valve expressing surplus desire and other feelings.

Careful study is necessary if the complicated field of dream symbolism is to be fully understood. I am therefore deliberately restricting myself to general remarks.

There are other points to notice, there is often a strong dramatic element, many dreams are worked up into coherent

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stories. Often several ideas may be found expressed in one symbol. This is known as condensation. Again we often find displacement, the shifting of ideas from one person to another. Authority, at one time symbolised by the father, is shifted to someone else, probably an older friend. This brings us to what we call transference which is an important element in the relationship between the psychiatrist and the patient. To the patient the psychiatrist represents several people, often the parents, and, naturally, in dreams, thoughts and feelings connected with the parents are transferred to the analyst. This transference is a necessary condition in analytical treatment and is worked out in various ways.

ID, EGO AND SUPER-EGO

Returning to the consideration of the structure and development of the mind, we have found that there are different levels or stages of development. Freud called these the *Id*, the *Ego* and the *Super-ego*.

The *Id* is that part of the person that existed from the beginning. It contains the instincts and drives, it is the store room for repressed wishes and feelings. It belongs to the unconscious and is illogical, unreasonable and amoral. The *Id* is in fact the animal level, and does not contain any of the highly developed elements that are found only in human beings.

The *Ego* is the antithesis of the *Id*. It is conscious and develops from the *Id* during early childhood. Logical and reasonable it controls the *Id* and tries to adapt it to the needs of ordinary life.

Again, we find that, in its turn, the *Super-ego* is the antithesis of the ego. It is the code that controls both the *Id* and the *Ego* and can be said to be the highest point of development. Like the *Ego*, the *Super-ego* develops during early childhood and is often modelled on the child's parents. It governs the life of the individual in so far as it represents his moral judgment, and it operates largely in the unconscious.

You may say that all this professional jargon is unnecessary and wonder why you cannot say the same thing in ordinary language. If we talk about someone who seems to be at the mercy of his instincts, we mean that he is governed by the *Id*. The practical well adjusted person is guided by the *Ego* and if

we talk about being guided by conscience we mean the *Super-ego*. This is true but it does not completely cover the ground. For instance when we talk about the conscience we usually mean an influence that comes within consciousness, whereas the *Super-ego* belongs mainly to the unconscious. There are other reasons. We try to group neuroses in relation to the predominance of the various levels of the personality. We say that the *Id* is mainly affected, or the *Super-ego* is over developed. It often is and leads to neurosis. If we are to make such grouping it is obvious that we must have headings that are as precise as possible and these terms I have given you are generally accepted.

LIBIDO

There is another term I must define and that is the *Libido*. Freud described it as the energy of instincts which have to do with love. It is the *élan vital*, the intensity with which the individual feels. You may remember that I told you once that it was possible to differentiate babies at a very early age, this is because the intensity of their wishes, the *libido*, is different and it expresses itself differently from the beginning.

Freud maintained that *libido* was synonymous with sexual love and here he encountered a good deal of opposition. On this point Adler was opposed to him and held that the main instinct was self-preservation and sexual love was a minor part of that instinct. Other people have been of the opinion that the two instincts are separate and are of equal importance.

Definition is very important here. When Freud talks about love he means love in all its forms, love towards parents, towards children, towards nature, besides the love between men and women. He is aware of the difference in quality of these affections but he is of the opinion that they all spring from the same root though they look very different when they have fully developed.

When considering Freud's theories we have to remember the magnitude of his achievement. He has discovered new territory and the discovery gives him the right to name it and divide it into spheres of influence, even though it may be felt that in some places he has brought too great an area under one source of influence.

TRANSFERENCE

Transference is the relationship between the patient and the analyst. As the name implies it signifies the transfer by the patient to the analyst of feelings originally connected with other people, hatred, love, fear or respect. When the transference has taken place the various emotions are re-lived.

There are three stages in transference development. In the opening phase the patient can re-live his early emotions, he encounters very little resistance and accepts explanations and suggestions from the analyst. This opening stage is often very congenial, but difficulties arise quite soon. The positive transference changes into a negative phase; this is very necessary and essential if the treatment is to be successful. It clearly would not be of any use if the patient re-lived his early emotions and everything remained exactly the same. The analyst has to sort out the feelings and not only help the patient to re-live them, but to get some insight into the reasons for his early difficulties, to make unconscious emotions conscious and generally to revise his attitude. A complete new level has to be found and this process of re-education cannot proceed without difficulties arising. When this phase has been successfully completed, the next is the dissolution of the transference, a task which calls for all the skill of which the analyst is capable. Only if he succeeds can treatment be effective. The patient has to face the fact that he has to become independent again; if he does not, the dependence has only changed from one level to another.

Clearly treatment of this kind places great responsibility upon the analyst. It is highly specialised work and should only be undertaken by qualified people.

SEXUAL DEVELOPMENT

I have mentioned before that much of the opposition that Freud encountered was due to the emphasis and importance he placed upon sex. People, to whom sex is something unclean, were horrified to think that it could be of any importance in the lives

of children. It is obvious that a child has drives and urges. But it is argued that an infant cannot have any sexual urge. This is correct if we talk of sexual urge in the adult sense. No one would suggest that an infant could have sexual intercourse which is the final function of sexual development. The young child has no reproductive tendencies.

If, however, we return to our metaphor of the building in various stages of development, several parts may be recognised in their unfinished state and, similarly, it is not necessary for all parts of the body to have reached their final stage of development before their potentialities can be recognised. Freud called these unfinished parts of a function partial or component drives.

Let us consider some examples. I have chosen them from early childhood because it is here that the claim of sexual activity is most disputed.

1. An infant, five months old, lies in his cot and has just been fed, but he sucks his thumb with great persistence. Why does he do this? He cannot be hungry. No, he sucks because it gives him comfort and satisfaction and helps him to fall asleep.

Here you have an activity of an infant which brings satisfaction and pleasure. This can be called a drive or an urge if we like; it is certainly true that this form of pleasure seeking is indulged in by about seventy-five per cent. of normal children.

2. A little girl two years old is in bed ready for sleep. She does not lie still but rocks herself to and fro in the same way that mothers rock babies. No one has taught the child to do this. Children who have never been rocked by their mothers often rock themselves to sleep. They do it because it brings comfort and pleasure.

3. A four year old boy has a very possessive love for his mother. He wants to be with her all the time. He is on good terms with his father but is inclined to be jealous of him. On an occasion when his father had to go away for several days, the child said to his mother, 'Now I can sleep with you'. He thought if father's place was empty he should fill it. This is not unusual, it is often encountered. You would probably say that the boy loves his mother very much. Certainly he does but the feeling involves more than that, there is an element of possessiveness and jealousy.

4. Children between five and six are often very interested in

their bodies and often play games in which they explore each other. They are perfectly innocent. This is just curiosity and they want to enlarge their experience. This can be called sexual curiosity.

5. A boy five years old was observed, sometimes at night, touching his genital organ (his penis). This is usually called masturbation and similar activity can be found among girls at this age. It is quite common among normal children though it is often not observed. If you ask a child why he does it he will tell you, if he is not shy or frightened, that he likes it. Here again you find an activity which brings pleasure and satisfaction.

These examples have all been taken from the everyday life of normal children. In order to decide whether an incident has general validity, one has to ascertain whether it occurs regularly and is a rule rather than an exception. Freud is sometimes reproached with the fact that he started from the abnormal and generalised too easily. It is true that Freud's work was based on the study of neurotic people, but his findings have since been confirmed by others who have studied normal children. It is a great advantage to a psychiatrist to remain in contact with normal people. I was a school medical officer for many years and had great opportunities of working with normal children, and I can say from my own experience that the main facts of Freud's findings are correct.

It was not only a tendency to simplification which made Freud group different features under one heading. He had good reasons for attempting his classification, because he was trying to show that the different neuroses are correlated to the various stages of sexual development. Fixations at different levels correspond to the different forms of neuroses. This in itself would not be sufficient reason for grouping tendencies unless the observation was based on facts which had been proved correct. In the case of Freud his findings have been checked over and over again by unbiased observers.

In describing the sexual development of children I can only give you an outline of the intricate subject. There are two stages in the child's sexual development, the auto-erotic and the hetero-erotic.

First the auto-erotic. We have seen that the young baby lives in a world of its own, and all happenings from the child's

point of view are seen only in accordance with that fact. Every activity is centred round itself and its primary needs, food and sleep. Remember the first example of the thumb-sucking baby, the mouth is the most important organ, it is the place where most things happen in the baby's world. It is used not only for taking in food, but for sucking, and the fact that babies always want to put things in their mouths is explained by this: it is their first approach to the world. Freud calls a zone where pleasure can be found an erogenous zone. The mouth is the erogenous zone in young babies. He sees in these pleasure seeking activities the first indication of partial drives which can be found later in fully developed sexuality; he therefore counts them as sexual. I am sure I do not need to tell you that even in the adult the mouth is still an erogenous zone. Freud calls the mouth zone the oral zone and talks about the oral phase.

This is followed by the so-called anal phase, a stage during which the child shows definite interest in the zone round the anus. Interest in the digestive function and in urinating belong to this stage of development. As the child develops the libido goes in different directions. The child's own body ceases to provide sufficient interest and he begins to look for objects outside his own sphere, pays attention to other people. He has started the hetero-erotic phase.

Naturally the child can only direct his attention to people within his reach. Parents or their substitutes are therefore the people to whom it looks at first. No question of selection of the sexes arises. The mother usually deals with the child during his first months and therefore mother is the person on whom interest and attention is focused. If, for any reason, mother is not available, then a mother-substitute, grandmother, nurse or father is found. This first part of the hetero-erotic phase we call the undifferentiated phase.

As the child grows selection begins. Usually the son is inclined to attach himself more to his mother and the girl to her father. You remember the example of the possessive little boy who wanted his mother all to himself. Here the wishes were very definitely expressed, but the same conditions in a lesser degree can be observed in many cases. Freud calls this stage the Oedipus situation. This expression is derived from the Greek saga in which Oedipus killed his father and married his mother, but do not let this origin alarm you. The normal boy does not

want to kill his father and take possession of his mother, but he often wants her exclusive attention. I am sure you will have seen such examples from time to time.

The Oedipus situation is normally a temporary phase which is followed by other conditions, but it is of great importance for future development. The way in which the child faces and deals with the difficult situation is decisive for future adjustment. Many men who cannot settle down to marriage have been arrested in their Oedipus phase. Modern psychology often has to deal with this form of fixation. You may say that you know cases where there is no trace of any such attachment to the mother. This may be so, very often a child does not stay for any length of time in this phase and on the other hand, even if behaviour does not show any traces, they might be repressed and not show themselves until later in life.

The next part of the hetero-erotic phase is the direction of feelings towards people of the same sex. This is known as the homosexual phase but it has no connection with adult homosexuality. It is only a temporary attraction. These emotional developments are often normal, and they do not noticeably disturb and delay further development, but there are cases that cause trouble. Two examples may help to illustrate how this phase can cause emotional difficulties.

1. A sixteen year old girl at a boarding school has a great admiration for the gym mistress. She has always been her favourite teacher, but lately the girl's feelings which were calm and pleasant have become passionate emotions. She is restless and sleeps badly. She tries to follow the mistress wherever she goes. The mistress was very embarrassed by this display of affection. The whole disturbance was particularly unfortunate because the girl was just about to sit for an examination, and this emotional disorder was likely to ruin her chance of success. I was called in to advise, I will not go into the question of treatment, but give you another example.

2. A seventeen year old boy at a famous public school became very friendly with another boy. No trouble arose at first, the two were inseparable, but the friendship seemed to be on a normal level. Later however trouble arose, the first boy became possessive and as his friend resented this there were quarrels which led eventually to a fight in the dormitory with consequent general disturbance. In its later stages the relationship was

quite different from normal schoolboy friendship, there was an alarming degree of urgency and intensity.

In neither case was there any trace of genital activity, all the difficulties were in the mental sphere. There are however cases in which definite genital symptoms can be found and sometimes other traces of sexual activity in the narrower sense. These difficulties arise during the homosexual phase which is a temporary stage of normal development. If the manifestations remain normal the phase only calls for the exercise of tact and understanding on the part of adults.

The homosexual phase is followed by the final heterosexual stage in which boys and girls gradually develop an interest in the opposite sex.

I am afraid this has been a very brief outline of the stages of sexual development, but I hope I have made it clear that the whole process functions purposefully and that all the component drives and urges have their place in bringing sexual development to maturity. In normal development the process passes from one phase to another smoothly and without any great upheaval. The child who is mentally and physically healthy and lives in a favourable environment, obviously stands the best chance of reaching sexual maturity without serious difficulty. One thing must be understood, though undoubtedly freedom in a child's environment is essential, too much freedom can be bad. To quote the words of a headmaster referring to the principles on which he runs his school, 'Large grounds, well hedged'. In other words, plenty of space and opportunity for the development of individuality but well defined limits, some discipline and order, some duties and some responsibilities.

This is the ideal method but there are cases in which difficulties arise. Grown up people might retain an oral preference or anal interests, in other cases the component drives retain their importance and lead to perversions where part of the sexual function replaces the whole.

Under certain conditions a child will become fixed in one particular phase and stay there instead of passing to the next; this is known as a fixation. Let us take as an example the Oedipus situation. The boy who is abnormally attached to his mother does not shift his interest to other people, to boys of his own age for instance. It may be that his parents have not seen the necessity for bringing him into contact with his contem-

poraries. If he is an only child he may live a very sheltered life and naturally clings to his mother. There are some parents who so dread bringing their child into contact with infectious diseases that they take no account of the risks involved in condemning him to a state of mental isolation. The trouble may arise when a mother feels frustrated herself and finds an outlet for her emotions by pouring them out upon the child; she often does not realise the harm she is causing.

Another form of sexual maladjustment is regression, when the individual goes back from one phase to an earlier one, which may have various causes. I will illustrate it with one example. A young girl has an unsuccessful love affair which leaves her feeling disappointed and frustrated. Often she will turn back to her homosexual phase and develop a strong attachment for another girl. Sometimes she will go back even further and revive her attachment to her father. There are cases where regression becomes permanent and the girl never marries, because of her fixation.

Sometimes trouble arises when there is no one available to receive the love that has been rejected. In such cases there is no opportunity for fixation or regression and here a tendency may develop to turn inwards. The individual is shut in and has to hide his feelings, he represses them. Usually this lack of outgoing love is combined with strong taboos which make repression more than ever necessary. The results of such a condition may be a complete withdrawal from active life or an immoderate outburst of affection later on, directed towards an individual who is often quite an unsuitable person.

JUNG'S ANALYTICAL PSYCHOLOGY

During my last two or three lectures I have tried to give you an idea of Freud's theory. I pointed out the main features and talked about the function of the unconscious, dream interpretation and sexual development. Before discussing neuroses in general terms I should like to tell you something about two other theories which have been developed.

I told you that Freud's theory was complicated, but the theory about which I am now going to speak is even more complex and can only be dealt with here in broad outline.

Jung may be called the philosopher among modern psychologists. He was originally one of Freud's pupils but he parted from him quite early and developed his own line of thought. His outstanding contributions to modern psychology have been the understanding of the unconscious and typology.

Jung believes in the existence and importance of the unconscious but goes further than Freud. The universality of symbols in dreams led him to think that there must be a basis behind the personal elements of a dream, which is common to the whole species. He made an intensive study of folk lore and mythology and developed the theory that, besides the personal unconscious of the individual, there is a universal, collective or racial unconscious which is impersonal. He held that this collective unconscious can be traced back to the earliest days of history and that there are elements of it in every individual. These ancestral elements he calls archetypes and he maintains that it is necessary to understand them if we wish to make a successful study of the mental life of human beings.

Jung consequently has a different approach to dream interpretation; he tries to get beyond the personal and find the ancestral elements behind the symbols which the dream discloses.

He differs from Freud again about the importance of the sexual drive. Whilst conceding its importance he is not willing to subordinate all other drives to it. Libido is for him a broader feature, a general life impulse.

He also differs on the structure of the mind. I must, however, confine myself to mentioning some of his ideas without developing them. He talks about the anima and the animus which

are the unconscious counterparts of the conscious sex character of the person. A woman has an animus—the male counterpart to the femininity within her unconscious, and a man has an anima – the feminine pole to his masculinity. Another of Jung's expressions is the so-called persona which can be described as the mask that is shown to the world. It is possible to compare this part of the personality with the ego in Freud's nomenclature, but the two meanings are not identical.

Jung divides people into two main types, the extraverts and the introverts. This classification applies to normal as well as abnormal people. The differences between them are that the introvert looks more into himself than into the outside world. The extravert looks more into the outside world. The introvert is detached, the extravert less so. The introvert is inclined to isolate himself, the other likes a crowd. The introvert is shy and easily embarrassed, the extravert likes people around him and is not happy without them. The introvert has less self confidence than the extravert. We all know people who fit more or less into one of the two groups, though here, as in all classifications, there are not only pure forms but various mixtures. Many people are of the opinion that these two groups are largely identical with Kretschmer's schizoid and cycloid temperaments. I share this view.

Jung sub-divided his type groups into further classes, he differentiated the thinking, the feeling, the sensational and the intuitive, but it would lead us too far away if I were to attempt to give examples of all the different sub-groups.

ADLER'S INDIVIDUAL PSYCHOLOGY

Whilst Jung has attracted a smaller following than Freud Adler has done the opposite. The name given to his school of thought is paradoxical since it is least concerned with individual psychology. If Jung is the philosopher among the psychologists, Adler is the sociologist. Social psychology would be a better descriptive title for his approach to the subject.

Adler, like Jung, was one of Freud's pupils but he too developed theories of his own which took him even farther away from Freud's thesis. His school of thought attracted a great many people, particularly educationalists. One of its attractions is that of the three main theories on psychology Adler's is by far the easiest to understand. This in itself would not be a disadvantage but the view is widely held, and I subscribe to it myself, that he over-simplifies, and this leads to broad general outlines and lack of attention to detail.

Adler maintains that the strongest instinct is self preservation and regards it the central fact to be considered. He sees the individual as a member of a community and classifies people by their ability to fit into the life of the group. He is of the opinion that the main drive is the will to power. This is in everyone, but many people are unable to satisfy it, with various consequences. Some will resign themselves and accept their own limitations whilst others will actively revolt if thwarted in their attempts to dominate. There are people who are acutely aware of inferiority and they conceal this by what is known as over-compensation and become very overbearing or aggressive.

Adler also stressed the fact that the presence of a physical defect or weakness had its effect on the mental outlook. Freud and others were also aware of this fact, but Adler has investigated the matter very thoroughly and lays great stress on the far-reaching effects of what he calls organ inferiority. The world is largely man orientated, that is to say that men usually have the management of world affairs. From this Adler deduces that inferiority feelings are tinged with characteristics of the female sex. He talks of the masculine protest. A man who feels himself inferior often puts himself on the level of a woman. A woman who feels inferior to men may imitate men in her behaviour

and attitude, doing this as a protest against the alleged inferior role of women.

Feelings of inferiority are due in a large degree to unwise treatment in early childhood. Excessive indulgence or severity may bring about the same results.

Adler is mainly interested in the conscious life. He tries to assist his patients to overcome their inferiority feelings and make a healthy adjustment to life. He sees neurosis as the individual's attempt to get away from his own inferiority and make a better place for himself. These ideas have attracted many people and it cannot be denied that Adler's theories have been of great assistance to psychologists, but there is the danger of over-simplification and superficiality.

NEUROSES

After considering these various theories you may well ask how it is possible to find any basis for treatment of neuroses, if even the experts do not agree with each other. The answer takes different forms. Some psychologists belong to one or other of the schools of thought and work on more or less orthodox lines. Others, myself among them, have made an intensive study of all the available material and have formed a basis on which to work, made up of contributions from all the schools of thought together with acquired experience. Such a basis is always open to modification and revision.

In my view the three main theories are not incompatible. The inferiority feeling which is so important in Adler's view is very like the fear which Freud and others have regarded as all important. To take another example, you will remember the schizoid type, the lonely withdrawn person. It is possible to look at such a case from the analytical point of view and correlate the neurosis with thwarted sexual development, which would be Freud's method of approach, but it would also be possible to arrive at a conclusion by working on Kretschmer's theory of the relation of character and temperament to physical make up. Again, the importance of the 'will to power' is recognised by both Adler and Freud, though Freud sees the aggressive drive as closely connected with sexual urges.

These are only a few examples which demonstrate similarities in outlook. The fact, however, remains that there are differences of opinion. The mind has many facets and can be correctly described in many ways. There is a certain range of possibilities of approach and the particular choice of a system of thoughts and ideas is determined to a considerable degree by the personality of the scientist. This applies as well to the founders of schools of thought as to their members. Psychological outlook cannot be completely detached from personality, which leads to special emphasis and accentuation. Being an eclectic by nature I think safety and accuracy is served best, if I take advantage of the different contributions and approach the subject from several angles.

There is hardly any disagreement among psychologists about the importance of fear in neurosis.

Fear, in itself, is not a neurotic symptom. On the contrary it is a normal and necessary part of the individual's make up. If fear did not exist survival would be almost impossible; it is fear that gives the warning signals, and it ensures, for instance, that we do not cross the road without looking where we are going. But we have to consider the difference between normal and abnormal fear. It was not pleasant to be in London during the blitz. People's reactions were varied. Some were more affected than others, but hardly anyone could honestly say that he did not experience fear at all. There are people whose imagination is not given to reflecting upon death or injury to themselves. They can imagine these things happening to others, but not to themselves. These people are not unduly affected by the presence of danger. Then there are those who experience fear but have their feelings so well under control that they can continue their work without appearing to be affected. The great majority of people carried on as far as possible, as they had always done, during the air raids on London. There were quite a number who, having no urgent business in town, took notice of the official instructions and evacuated. In either case they showed normal reactions.

There were, however, people who showed a different kind of reaction. A young man of twenty-four came from London during the blitz. He settled in Reading but, when an air raid took place, he got into a state of panic and wanted to leave at once. This clearly was not a normal reaction since his emotion was quite out of proportion to the external conditions. When I treated this man as a patient, I found that this was not an isolated symptom, there were many more that indicated a neurotic state.

Another example of the difference between normal and abnormal reactions. Two people are in a car crash, neither suffers serious injury, just bruises and shock. One recovers after a few days, is out in the car again and does not think much more of it. The other develops a fear reaction, he does not drive in a car for months, he feels insecure and gets easily upset. He has lost his inner balance and the accident has seriously upset his whole attitude to life.

What makes the difference? As the external conditions were

the same in both cases, it is clearly caused by the differences in the two characters. We talk about the individual resistance, which is the susceptibility or general reaction to external incidents and which varies from one individual to another. If the blow is heavy, only a very strong resistance can stand up to it but, if it is slight, then the weakest resistance can meet it. Therefore, in considering individual reactions, we have to take into account the weight of the blow in proportion to the resistance offered, before we can make an adequate estimate of behaviour and reaction.

In my opinion, the individual resistance is on the average strong enough to meet and cope with very stringent exterior circumstances. The war has demonstrated that the terrible experiences, suffered by so many people, had lasting psychological effects upon a minority only.

Another war example may illustrate our point. A house is struck in an air raid and some people are killed. The survivors have lost their relatives, their home and all their personal possessions; under this great blow they break down. This is quite understandable, but most people who have been so unfortunate gradually regain their normal attitude to life. Otherwise, probably on examination, neurotic symptoms will be found. A temporary breakdown is not necessarily neurotic. But if the mind does not swing back to its balance of health and remains fixed in an unnatural state, then it is clear that the incident has precipitated a neurotic reaction.

Another relevant fact is repetition. Whilst in earlier stages of psychology it was thought that one particular incident, or trauma, accounted for the development of a neurosis, it is generally agreed that repetition of similar situations, due to environmental or constitutional conditions, prepares the way for the development of neuroses.

The length of time during which the individual is subjected to the strain is also an important factor. If it is of relatively short duration, the individual resistance can often stand up to it, but if the strain is prolonged then even the strongest may give way.

The history of a neurosis goes back to early childhood and conditions can usually be found which predispose the individual to the development of neurotic difficulties. These conditions are sometimes environmental or they may be hereditary. It is often difficult to distinguish which of these trends is responsible. For

practical purposes it is important to realise that they are very closely connected from the beginning of life. Freud was aware of these difficulties. As he realised that treatment could not affect heredity, he concentrated on those aspects of neuroses that might respond to treatment. Adler concentrates mainly on environmental factors whilst Jung gives importance to the facts of heredity.

I hope I have made clear the difference between neurotic and normal reactions. It is the whole behaviour that has to be taken into account and not isolated symptoms. A neurotic person is usually self-centred, thinking so much of his own difficulties that he has no time to think of others. He will often complain that he is not loved enough. That is true, usually he is incapable of loving. The balanced love situation is characterised by giving and taking. The neurotic, often taking more than he gives, cannot love in proportion as he is loved.

Part II

APPLICATION OF PSYCHOLOGY

PSYCHIATRY

We now arrive at the point where, having studied the nature and origin of psychology, we have to consider its application.

Obviously one main field in which psychology works is psychiatry. Modern treatment has developed with the increase in knowledge of the origin and nature of neuroses. Psychiatrists have to re-educate their patients, to help them overcome their difficulties and adapt themselves to the life of the community. They have to make clear where they have failed in the past and to help them re-build their lives on firmer foundations. This can only be done very gradually and the patient is closely guided by the doctor in the early stages. As his confidence develops he is encouraged more and more to act independently.

One misunderstanding should be dealt with here. It has been thought that the discovery of the root of the trouble is all that is required, but this is certainly not the case. Insight into the cause of the neuroses is a necessary condition, but it is not, in itself, the cure. Therefore treatment has to consist of two main phases, analysis and reconstruction. Both are essential but they may differ in their relative length and importance. The longer the neurosis has lasted, the longer must be the period of analysis. In cases treated in their early stages the analysis may be short.

Psychiatrists themselves differ in the importance they attribute to the two phases. Some are more interested in the analytical part of the treatment, whilst others, Adler among them, concentrate more on the work of reconstruction. However, it is agreed by all experienced psychologists that both phases are of vital importance.

This brings us to the interesting point, how far the personality of the doctor comes into the picture, how his special ideas and convictions influence his methods of treatment and how results are correlated to the different methods.

Some psychiatrists think that their personality should intrude as little as possible and every effort to achieve detachment should be made. Whilst I would unhesitatingly agree that

methods should be developed beyond personal preferences, the fact remains that the same method assumes a slightly different aspect in the hands of different people. I think this individual application forms a synthesis between impersonal scientific knowledge and personal experience, and is a very valuable factor in making the treatment effective.

We should not, however, come to the conclusion that personality means everything and science nothing; if we concede this then any quack who has some sort of personal influence could be trusted to cure psychological difficulties. It is true that this is possible in simple cases, but the danger is great and such a person would be likely to do more harm than good. There are people of wide general experience who have not made a study of psychology, but who have strong beliefs and convictions, often religious people. Should they attempt to treat neurotics? Definitely not; they may have some qualities that enable them to influence others. But how can they hope without sufficient scientific knowledge to make an accurate diagnosis? It must be remembered that psychiatry is as much a science as surgery and no one would suggest that a man who has a natural ability for work with his hands should be allowed to operate for appendicitis.

Psychoses are, in contrast to neuroses, more serious disorders. Although they are different from neuroses they have some factors in common. You may remember when we talked about Kretschmer's theories, it was stated that if mentally ill, people developed the illness to which their physical and mental type disposed them. Under certain conditions the schizoid individual might develop schizophrenia whilst the cycloid type would develop a manic depressive disorder. These are the two main psychoses, though there are other forms of insanity.

Psychology plays an important part in the treatment of psychoses, often in connection with methods of physical therapy such as electric shock or insulin treatment.

It is not always easy to differentiate between a psychosis and a neurosis which have many features in common and this is one more reason why the diagnosis of all psychological disturbances should be left to the expert in psychiatry.

GENERAL MEDICINE

Wherever illnesses are to be treated, psychology has a part to play. Owing to the unity of body and mind there is no physical illness which does not affect the mind in some way, and there is no psychological symptom which has not physical features. Fear is one of the main factors in neuroses. I need not tell you that there is also hardly any physical illness where fear does not play a part and often a considerable one. Not only the patient who suffers from cancer is in a state of anxiety; other illnesses even, where there is no immediate danger, produce fear and depression which ask for mental reassurance.

Whooping-cough offers a very good example of the unity between mental and physical features. If two children, of the same family, both suffer from whooping-cough it can be clearly seen that the illness varies according to the temperament of the child. The placid, quiet child will make a quicker recovery than the nervous excitable type. Both have caught the same infection, but the course of the illness varies considerably. The excitable child is likely to have more attacks of coughing and the attacks will probably be more violent than in the case of the steadier child.

Another illness, the much dreaded diphtheria, may further illustrate our point. There is often blocking in the pharynx and trachea due to the diphtheritic membrane; this narrows the passage through which the child breathes. It is a recognised fact that temperament plays a great part in deciding whether the child will survive or not and the patient who can be kept in a tranquil state has more chance of recovery. The serum, which is used to treat cases of diphtheria, takes some time to work and this necessitates keeping the child alive long enough to allow the treatment to become effective. Nervous activity is likely to exhaust the slender resources of vitality.

The mental attitude is often the decisive factor in cases of pneumonia. As you know pneumonia reaches a crisis, and the patient with a strong will to live is more likely to come through than one who either does not care, or whose mind is restless.

These examples are concerned with acute illness. I could mention many more, for instance, heart attacks in older people.

Heart and mind are intimately connected and any spasm which occurs gets stressed or reduced in force by the mental attitude.

It is obvious that in chronic illnesses psychological factors again play an important part. Imagine how life looks to a patient suffering from tuberculosis. He may have to spend several months in hospital and then possibly a year or two in a sanatorium. He is cut off from normal activities and the amenities of life, his state of health is the main centre of interest. Visiting hours mark the milestones on the long road he has to travel. It is only during visiting hours that he has any contact with normal life. The mental state of people who have to live under such abnormal social conditions is often badly affected. Self centredness, anxiety and frustration flourish and the attempt to alleviate their lot by the introduction of occupational therapy is much to be encouraged.

What I have said about tuberculosis applies to all other chronic illnesses, and also to cases where patients are incurably crippled, in fact wherever normal life is made impossible because of some physical defect. General psychological care can make life more fruitful, and every doctor who claims to be a healer has to consider the mental aspect of his cases. He must have a certain amount of psychological understanding if he wants to do his best for his patients. Knowledge and experience in general medicine which are obviously his primary equipment cannot always act as a cure by themselves, and there are many doctors who, though prejudiced against psychology as a science, are nevertheless good psychologists instinctively, and often owe more of their success to their powers of understanding than to their medicines.

Prevention of illness is as important as treatment in every branch of medicine and the same is true in psychology. Modern society is realising more and more the importance of preserving mental health. Education, which is our next subject, is one of the most important spheres of activity in this respect.

EDUCATION AND CHILD GUIDANCE

Education is a subject of great general interest. I may therefore devote comparatively more space to the relation between psychology and education. Psychology owes much to the older science of education, though it has lately been able to repay some of its debt by throwing more light on the understanding of the child. This has enabled education to revise some of its methods and adapt them to meet the needs revealed by the growing insight into the working of the mind.

In any consideration of education the question usually arises sooner or later as to its purpose? It is true that if you are seeking to bring children up in certain beliefs, these will have a definite bearing on the methods used. Even so, there are certain principles which underly the growth and development of children which have to be taken into account whatever the end in view. To return to my example of building a house. There are many factors that have to be considered irrespective of whether you are building an hotel, a private house or a factory. Children follow laws of development, and the more these are understood and taken into account the more effective will be the educational method, even when the intention is to produce followers of a particular religious faith or political creed.

Some psychologists maintain that it is necessary to analyse every normal child in order to make it educable. I would not go so far as that, but I think it would be valuable if all adults who have to deal with children, such as parents, teachers and nursery workers, could acquire some knowledge of psychology. We are a long way from this ideal condition, but efforts are being made to bridge the gap which exists and which prevents modern knowledge being used to its fullest extent.

In considering the interaction between psychology and education it has to be remembered that education has a dual function, first to support and guide the formation of the child's character and secondly to convey knowledge. Let us consider the second first, the conveying of knowledge. Although teaching is more or less the exclusive province of education, psychology can be of assistance even here. The Gestalt theory has stressed the importance of the method by which knowledge is given to

the child. If he has to read Shakespeare at school he may find it boring, but if he can act a part in the play the whole thing becomes different. If the child can be given a conception of the matter as a whole he is readier to study the parts with more interest and intelligent understanding. This is only one point. It could be generally stated that the more a teacher uses psychological knowledge the more efficient he will be in conveying knowledge to his pupils. It depends, however, on the size of the class whether he is able to consider the individuality of each child and bring out his special abilities.

If a teacher has no time to deal with children who are particularly difficult he should try to see that they get attention from a qualified person. This brings me to an important point. Every school, or at least every group of schools, should have a psychologist who can advise and possibly treat difficult cases. Many modern schools have already made this experiment which has been found extremely valuable. In some cases the school doctors supervise not only the physical development but the mental development as well. It seems likely that this activity will develop in the future and we may reach a stage where every child will have a complete physical and mental health record, kept by the school authorities from kindergarten onwards. This record would prove a very useful basis for vocational guidance. We are, however, still far from the realisation of this idea.

The argument usually put forward when such a question is discussed is that the money is not available. But the scheme would actually save money. If there were continuous mental supervision there would be a combing out of children who were not receiving the education for which their abilities fitted them. For example, classes may often be hampered by the presence of one or two children who for one reason or another hold work back. Often one finds that their intelligence is not up to standard or there are behaviour difficulties which need expert attention. In such cases they should be directed to special schools or classes. Their removal would lead to a great improvement in the average rate of progress. There are cases where special classes for stammerers have been established, and others for particularly nervous children. There are great difficulties in providing such schools, but if the importance of selection and re-direction can be established beyond doubt and, if it can be

proved that the scheme would be economically sound, then ways and means will be found.

You will realise that an activity of this kind is preventive. It tries to find remedies in time before serious damage is done, and before time has perpetuated difficulties that could have been easily set right in their early stages.

A close co-operation between home and school is desirable from the point of view of education as well as psychology. Many schools have realised this fact and psychologists do their best to encourage co-operation wherever possible. If we have to treat difficult children we usually get into touch with the school either in person or by correspondence, but there are schools where we do not receive much encouragement.

Testing is another point of interest common to teachers and psychologists. Tests are very useful in assessing intelligence and many schools have introduced them. I think the combined method of examination in the old style and additional tests will gradually gain ground.

Vocational guidance at the end of school life is another point of common interest to psychologists and teachers.

The guidance of character and behaviour development is also of mutual interest. A suitable education may discover and rectify a difficulty that, if unobserved, would need lengthy psychological treatment later on.

I think it will be useful if we now discuss some of the problems that are likely to arise in everyday life. We will start at babyhood and see what contribution we can make.

A crying baby. A six months' old baby cries excessively, neither mother nor baby ever get an undisturbed night. Mother says she has done everything she can think of, has given the child toys, has rocked him for hours, has taken him into her bed and played with him during long sleepless nights. Nothing has been of any use and she is in despair. The child has been examined by a doctor who says it is in perfect physical health.

This is a common case with which we are regularly confronted. What can the psychologist advise? If the child cries constantly when he is not hungry or physically ill, there must be a psychological reason. The child might be frightened. This raises the question, can a very young child be frightened? What causes the fear? This may be due to the mother, who being in a highly nervous state herself may have affected the

child. Insecurity, indecision and inconsistent behaviour can affect a baby and cause fear. But often the constant crying is not a sign of fear at all but a means of attracting mother's attention. The child knows that crying will bring mother at once. Opinions differ whether or not the mother should always be within earshot. The idea has been expressed that the child should always know that mother is there, and that if she does not come when he cries then he might fear that she will never come back at all, and this fear may have far-reaching effects on his development. I do not agree with this idea, I think that the child should not normally fear losing the mother, if she does not always come when he cries. The atmosphere surrounding the child should be such that the child would not think that it was abandoned by his mother if she did not answer his every summons. It has to be remembered that children have to be brought up to fit into ordinary life, and mother will not always be there every time she is wanted.

We have to keep a middle course all the time. On the one hand the child must be surrounded by an atmosphere of security but on the other hand he must learn to be independent, and also that he cannot dominate his surroundings. Too great a dependence produces fear. The ideal way is to create a calm atmosphere, ready to help but not to spoil.

Sometimes we are consulted by a mother who has difficulty in feeding her child. A typical example is the case of a ten months' old baby. The child had a slight cold and his appetite failed. Mother tried everything possible to make the baby eat but had no success. She went to the doctor who carefully examined the child but found nothing physically wrong. He told her not to worry but just to wait until the child's appetite came back, but this was just what the mother could not do. She worried, she tried all the tricks she could think of; meal times took so long that when one was finished it was nearly time for the next. At every meal there was a struggle between mother and baby.

We meet this difficulty very often, the characteristic features are a baby who has no appetite and a mother who worries. What are the causes? Obviously the first thing is to ensure that there is nothing physically wrong with the child and quite often there is not. What has been forgotten is that the child has not always the same appetite, particularly if it has had a cold or other mild upset. Instead of waiting for the normal appetite to return,

mother develops fear and anxiety and this in turn makes the baby rebellious and nervy. In such cases we try to educate the mother and help her to get rid of her fears. Often we find that she has nervous symptoms, feels unhappy and frustrated. In some cases the baby is a nervous child, but this is not always caused by heredity, quite often it is brought about by constant contact with a nervous, over anxious mother. It is the mother whom we have to help since she is the main factor in the baby's welfare.

Many young mothers are inexperienced and over anxious. There are many occasions when a psychologist can help and advise her. There are also many clinics and welfare centres where assistance is available as you all know.

We now come to the next age group, the toddler, the child in the kindergarten or just before. Again I pick out a typical case.

A mother comes with her three-year-old son. He is, she says, completely beyond her control, She does her best to cope with him but he is so strong and she feels she cannot keep on with this constant struggle. If she tells him to do a thing he does the opposite. His favourite word is No. This was one of the first words in his vocabulary. She has tried all methods of dealing with him, but nothing has had any result. The boy can be affectionate but as soon as he cannot have his own way he becomes obstinate. Father can do a little better, but he is away from home most of the day, and too tired in the evening to take an active part in the solution of problems. The parents are happily married and have no real worries except about this boy who is so far the first and only child.

This again is a very common case. Indeed, what is known as 'toddler's obstinacy' is such a regular condition that the question has been raised whether this should not be regarded as a natural phase in child development.

You will remember that when we were studying character development we found that a young child has a formidable task in front of him as he grows up, particularly during the first five years. He has to learn that he is not the only person in the world, that other people have to be considered. He has to learn to fit into the community and this process is not easy. It demands the control of instinctive wishes and the curbing of self will. For the child's parents and the home are a miniature edition of the world. Parents serve as patterns for authority and love.

It is at this stage that the Oedipus situation establishes itself. A number of repressions and temporary setbacks have to be dealt with and it is no wonder that the course of development is not always smooth.

Obstinacy is a typical reaction to the difficulties. It is a protest of the instinctive drives against the growing demands of the outside world. Love and hate, affection and fear of authority alternate until the young child has gradually adapted himself. It is therefore justifiable to regard a temporary phase of obstinacy as normal. As everywhere the form of reaction is determined by the individual character and the kind of environment. In some cases obstinacy is not particularly noticeable, but there may be other behaviour difficulties.

Psychology can help in cases of this kind. Each case has to be treated on its merits, but in general one can say that the child has to learn to adapt himself and not always demand his own way. On the other hand, his initiative and will to power must not be crushed because under the surface of obstinacy is energy, initiative, and craving for independence, in themselves useful and necessary instincts which have to be preserved and lead into the right channels.

Another case often brought to us is the destructive child. A mother complains that her four-year-old boy is very difficult to manage, but she is especially worried by the fact that he shows an undue interest in destroying things. All his forms of play are forms of destruction. He has spoiled many valuable things, apparently on purpose. I learned to know this boy and saw him play quite often when he came for treatment. That he was very intelligent could be seen in his ability for building houses, bridges, etc., but his main purpose was destruction. He built houses only to knock them down. As soon as he had finished building a house or a bridge he would knock it down with a brick showing great pleasure in doing so. This boy was in a state of great conflict with his parents. He was jealous of his father with whom he had to share his mother's affection. He could not accept his place as one of the family, he wanted to be the only object of his mother's affection. Once when he was playing in my consulting room, I interrupted him just as he was going to throw a brick on to a well built house. I said 'Perhaps your parents are in that house'? He hesitated for a moment and then said firmly, 'I don't care', and smashed the house.

In these days it is not surprising that children like destructive play when the adult world is destroying cities and towns on such an enormous scale. It is likely that this will have far-reaching results on children of this generation, but the case I have given you came to me before the war.

Destructive tendencies are not always as outspoken as in this case, but they can often be found in a lesser degree. Sometimes cruelty towards animals is combined with destruction. We find these conditions mainly in boys, but sometimes in girls, in a less pronounced form.

Many parents are bewildered by these manifestations and often shocked. We can reassure them with our experience and knowledge. A child who shows destructive tendencies may develop later on into a good responsible citizen. It is a temporary phase which expresses protest against the outside world. Such children are not yet ready to accept the part which is given them; they want more. We call destructive and cruel instincts sadistic tendencies. Sadism is one of the partial drives which accompany sexual development, a component drive which is often combined with love or hate. It is for us to see that it does not get fixed and replace the whole sexual trend or become a permanent element in sexual activity.

We must always remember that children have to follow a long and difficult path until they find their place in the community. They will make the necessary adjustments, with varying degrees of ease or difficulty, according to their character and temperament. Adults should be sensitive to the needs of children in their charge. Psychological understanding is a necessary condition for dealing effectively with problems that may arise. Neither complete repression nor uncontrolled indulgence is advisable.

We sometimes have to deal with children in a state of anxiety. Here is a typical example. A little girl of four cannot sleep well, she wakes up from time to time and is disturbed and frightened. Later the condition develops and she shows signs of abnormal fear during daytime. She is afraid to be alone in a room even for a short time. She cries easily and will not leave her mother. The slightest reproach brings tears; she has no real interest in play, is very shy with grown up people and even with other children. Although at one time she went to the kindergarten she can no longer be persuaded to go. Her mother has become

more and more worried and has not the slightest idea how to handle the trouble.

The question arises why this state should have developed in the child who had, up to this point, been quite normal. Mothers, when asked, can usually remember little incidents that have some bearing on the matter, such as a theatre performance, or being bullied by another child. These incidents, however, only show the surface of the picture. They are precipitating factors, the real causes being problems in adaptation. Such children fear life and its difficulties. Although the conditions may appear different in each case the underlying cause is usually the same, insecurity and failure to cope with the demands of life. There are courageous children and there are timid ones, and naturally the timid child is more likely to become a prey to feelings of insecurity and fear, although this is not the only factor. There may be elements in the environment which bring the fear to the surface. An over anxious mother—an excessive indulgence may have a good deal to do with it. Problems within the family, perhaps the birth of another child, or the attitude of an older brother or sister, may have an influence on the child's development. We can only hope to understand the situation if we explore all the conditions of the child's life. Once the main points have been grasped we can attempt to help and this is a task which often requires the exercise of a considerable amount of skill and knowledge. There are cases which respond to treatment at once and in many instances the parents themselves can deal with the situation, if they have patience and a thorough understanding of the child.

I have given you some examples of difficulties in early childhood, but do not think these difficulties are inevitable. Many children pass through the various phases and make their adaptations with only minor upsets or none at all. The more favourable the home conditions, the easier it will be for the child to pass through this first critical period without undue difficulty.

PROBLEMS IN SCHOOL CHILDREN

School life brings with it new problems. I will give you two examples of characteristic difficulties:

A ten year old boy is brought to us by his mother who says

he is always tired. He is listless and unhappy. He is a day boy at a grammar school, who has no friends. He does not like games, thinks the other boys rough and he is teased a lot. His standard of work is not high.

This is an everyday case, not dramatic, but certainly difficult. Before he can be helped it will be necessary to understand his intellectual difficulties. He will have to be tested to find his I.Q. Talks with his teachers may help to clarify the situation and some psychological advice may be useful. The question as to whether he is at a school suitable for him will have to be considered. He may need coaching to help him to reach the normal standard of work.

The other example is more obvious and more difficult. This is the case of a boy of twelve. He is thoroughly insubordinate, he disregards orders whether from a prefect or a master and his behaviour affects the other boys. The headmaster, who has described his conduct as abominable, has asked his parents to remove him from the school.

This is a well known public school though not very modern in its methods. Owing to wartime conditions, individual care for special pupils is not possible. He is an only child, very much spoiled by his parents. He is allowed at home to do more or less what he likes.

Psychological advice can be given with good effect in many cases of school children. Intellectual and emotional factors are present in varying proportions. Co-operation between teachers, parents and psychologists can reduce many of them.

A common problem which parents have to face is finding the right type of school for their children. Here the psychologist can very often help with advice, based on the child's character and environment. Questions such as day school or boarding school and the merits of co-education are some of the matters which have to be carefully considered. One should not theorise or generalise too much. One child fits better into a boarding school and another is better living at home, some children fit well into co-educational schools while others do not. The individual character of the child and the conditions of home life have to be taken into account so that the choice is not left to mere chance or to irrelevant factors, but is based on reasonable considerations.

ADOLESCENCE

Adolescence is a phase which calls for great understanding and patience from all who have to deal with young people. Everyone knows the boys who grow rapidly; they are shy and awkward and do not know what to do with their arms and legs. Their voices break and they show signs of a moustache. Girls, too, undergo physical changes at this time but they seem to be able to preserve some charm even through this awkward period. The physical changes are brought about by the endocrine glands. But it is not only the body that changes; the mind too is developing from childhood to maturity.

It has to be remembered that adolescence is a transition stage. The young boy or girl is no longer a child but not yet an adult and it is only natural that there should be difficulties. Many young people are conscious of feelings of insecurity. Familiar things assume a different aspect. Opinion and ideas, hitherto accepted as right, now appear to be wrong, and there seems to be no stability in life. There are many tasks to be faced, energy and effort are needed to cope with the demands of life.

This is a typical case of a boy during puberty. He is sixteen years old and has caused parents and teachers a good deal of trouble. He has been good at his school work and is preparing for his school certificate. Gradually his interest has decreased until he cannot concentrate. He is moody and listless and does not talk much even to his friends. He was always inclined to be shy and did not make friends easily, but his difficulties have intensified lately. At home he is secretive and moody and seems generally unhappy. He disagrees with everything his parents suggest and if he talks at all, it is usually to quarrel. He does not like his clothes, and cannot decide whether to wear long trousers or shorts. He wants to be independent but cannot make use of his independence. He rebels against orders or even suggestions and makes life at home unbearable. Physically he looks tired and he does not sleep well. Social life embarrasses him, particularly any contact with girls.

In another case the parents of a boy of fifteen came to consult me because they could no longer cope with their son. There had been a series of violent quarrels between father and son, leading

to blows. The cause of the quarrels was the question of religion. Father is very religious and wants to bring up his son to be the same, but has been entirely unsuccessful. The boy at one time showed some interest in religion but lately has had no contact with it at all. Things have gone from bad to worse and after the last quarrel the father thrashed the boy, then the boy revenged himself by burning some of his father's religious books.

The parents feel that, if conditions cannot be altered, some major disaster may occur.

The boy's history shows that he has always been difficult to manage. He is an only child, highly intelligent, and has no difficulties at school; he is a day boy at a secondary school. He likes reading and is at the moment particularly interested in political books. He has very few friends and is not interested in girls.

I had some difficulty in getting hold of this boy. At first he refused to come and see me, saying he was perfectly normal and that it was his parents who needed advice. In the end, with the help of the school authorities, he came. In view of the circumstances you can imagine it was not easy to make any kind of contact with the boy. At first he said 'No' or gave no answer to all questions, but he gradually responded and after some interviews I could complete the picture which had been given me rather one-sidedly by the parents. He was shy, reserved and not very talkative. He said he had difficulty in making friends. He disliked school but coped with its normal demands. He neither liked nor disliked his teachers; they did not interest him. He had been interested in religious matters but had recently developed doubts about the whole problem. He doubted the existence of God. He read many political books and was very interested in Russia but did not know whether he agreed with the Russian system. Asked whether he had discussed his problems with his father, he burst out laughing and said: 'That is impossible. You do not know my father. It is not possible to discuss anything with him, he just gives orders, that's all.' He said he hated his father. He got on better with his mother but did not talk much to her as he thought she was on father's side. He admitted that he had thought of suicide but so far had not had the courage to commit it. He definitely wanted to leave home.

I treated the boy for a time and then decided that there could

not be any effective help given whilst he remained in his home environment. I had considerable trouble in convincing the parents that this step was necessary, but when this was done and the boy left home, he recovered. I heard from him from time to time; he did not effect any reconciliation with his parents.

This was a very sad case of rebellion in puberty; the father was much to blame, his religious views seemed to be more the outcome of bigotry than conviction and he lacked tolerance which, as far as I can say, is one of the essential qualities of true religion.

Some time ago a mother wrote to our clinic asking if I would see her son, whom I had treated some four years earlier. I remembered the boy and his problems well. He had been brought because his mother could not cope with him. He was an extremely aggressive boy of the type I have described to you earlier. I treated him and saw him afterwards at intervals but I had not seen him recently. The new problem was this. The boy was a boarder at one of the leading public schools. Although he had been all right until recently, he had always been aggressive. One of the recommendations I had made in my earlier course of treatment was physical activity, and among other things he was a good footballer. School work presented no difficulties and he had a very high standard of intelligence. He went through several years of school life without noticeable difficulties, but lately he had changed. He became more and more rebellious, he quarrelled with boys and teachers. He had on several occasions refused to take punishment. In addition to this he had developed a passion for another boy, with whom he quarrelled from time to time, and towards whom he had become tyrannical and very possessive. There was no question of homosexual activity, it was confined to the mental sphere. The other boy resented his attitude and they frequently fought. Teachers tried to help but their help was refused. After one incident the boy was ordered, as a punishment, to work in the garden. He refused to do this and his parents were asked to remove him from the school. They were very upset at this request and asked the headmaster if he would defer the question of expulsion until I had had a talk with the boy. The headmaster agreed to this and the boy, his mother and the school medical officer came to see me. To be brief, I had great difficulty in convincing the school authorities that the boy needed treatment,

but eventually they granted reluctant permission for me to see him once a week. He told me all his difficulties and problems and his behaviour improved. His feeling for his friend was still intense and he behaved like a person suffering from unrequited love. He could not sleep, was listless and unhappy. The fact that he had full confidence in me was extremely helpful. Unfortunately, he became involved in another quarrel and as the school authorities were not willing to give him another chance, he had to leave at the end of the term. He was not sorry to leave, he realised that his relationship with his friend was broken as the other boy was now thoroughly frightened of him.

A place was obtained for him in a day school and the change of surroundings improved his mental state. He has settled down well in his new school and is preparing for his school certificate.

This is another case where old troubles and difficulties became accentuated during puberty. This usually happens. It is not that new features are introduced, but old troubles become more pronounced.

The examples I have given you have all dealt with boys, but this does not mean that girls do not have similar difficulties. Their problems are just as serious but not always so apparent.

I had the case of a girl of fifteen who had been at boarding school for several years. She had had no serious troubles and was in the top form preparing for school certificate, when she gradually lost interest in her work. She could not concentrate, became easily tired, could not sleep and quarrelled with her friends. Soon it became clear that she had fallen in love with one of the teachers, a woman of thirty who had just come to the school. She described the teacher to me in very colourful language, her beauty, her friendliness, etc. The teacher concerned, who was a kindly understanding woman, did her best to be helpful. She had several talks with her, but could not bring her to a more reasonable frame of mind.

When the girl came home for the holidays I was consulted by her parents and we came to the conclusion, after I had had some further talks with the girl, that it would be wise to change the school.

It would not always be right to take such a drastic step. Very often it is better that the girl should work herself through such a phase. If the teacher is willing to help there is a reasonable chance that the problem will be resolved without difficulty. In

this case the girl had to take an examination quite soon. She herself did not want to go back because she realised she would be unable to master the situation. She recovered from her passion gradually, and passed her examination.

There is one main point I want to make clear: adolescence does not confront us with entirely new problems, the boy or girl does not change into an entirely new person, it is just that old difficulties come to a head.

What can we adults do to help during the emergency? If we have prepared for the battle we can leave the youngster to decide his own fate but if not, things may take a serious turn.

The best preparation is a sound education, and if we have been on friendly terms with the child in the past then this relationship will stand the strain of the conflicts that arise. The problem of puberty is not so acute for a well balanced family where love and affection are present. Difficulties may arise, but in an atmosphere of mutual confidence they will be mastered. Even if the children cannot bring themselves to speak of their troubles, nevertheless their confidence in their parents will give them a sense of stability that will be of great assistance.

Proper instruction in sexual matters plays an important part in preparing for this time of crisis. The instruction cannot be condensed into one or two talks, it should be given gradually during childhood in accordance with the child's capacity to understand. What is said must be true, but one need not tell all the truth at once.

The child would not be able to understand and would be confused. One can distinguish between conveying facts and creating a sense of ethical values. Spranger once said, 'Physiological knowledge and medical warnings do not, in themselves, suffice to divert the power of desire and further explanation in itself, is not able to give the right mental and emotional background for the sexual drive'.

School and home can share in imparting the necessary instruction. The school can usually be trusted with the task of conveying the necessary knowledge. Biology lessons provide a natural opportunity for this. The second part, the building up of the emotional background, must be done at home. It is necessary to know the child's individuality and character in order to find the suitable time to act, a time when we can expect

the right response. Opportunities should not be specially created but should arise naturally.

Intuition can help in deciding the right time. Too late is as bad as too early. If we are not in time, the child will pick up scraps of knowledge in an unsatisfactory way. If we come too early we are bound to create bewilderment.

A girl should be prepared in time for the development of her body. The onset of menstruation otherwise may cause a great shock. But this is not the only point on which preparation is necessary. They should be given a complete understanding of the future part they have to play with emphasis on its importance. It is essential that they shall not feel their womanhood as something inferior to the masculine role in life.

To sum up, the most helpful attitude towards young people during this phase can be described as follows.

1. Understand what is happening, remember your own youth.
2. Be patient, which is more difficult than being active.
3. Respect the boy or girl, treat them as equals, do not attempt to be superior to them.
4. Keep pace with developments, be interested in new things.
5. Try to provide social facilities, clubs, dancing, etc.
6. Make use of vocational guidance if choice of work is important.
7. Co-operate with school.
8. Stand by and wait if you can be sure of the child's confidence.

If there are still difficulties then ask for expert help and try to avoid the possibility of alienation between parents and children.

Before concluding the chapter on education I should like to point out that there are many centres and institutions where expert advice on educational problems can be obtained. Child guidance clinics are being set up all over the country, and they deal with everything pertaining to sound psychological education. Nursery schools provide, for very young children, an atmosphere which is particularly suited to their needs and habits. In many cases where trouble arises, it is not entirely due to lack of understanding on the part of the parents. Bad surroundings, lack of space, absence of parents during the day and other home conditions prevent many young children from getting the right physical conditions and the necessary attention. Nursery schools supply this and can also provide a centre where

advice on questions of upbringing can be given. Many leading hospitals and other health centres have set up special departments to deal with matters of this kind.

It is clearly desirable that facilities offering assistance to parents should be developed in the future. We should aim at increasing the number of centres and institutions, at providing opportunities for training the personnel required to run them and at co-ordinating their various activities.

Psychology has a direct relationship with many spheres of individual and social life. Within the framework of these lectures I can, however, only deal with industrial psychology and delinquency.

INDUSTRIAL PSYCHOLOGY

The age of mechanisation confronts us with a formidable problem.

So far the adaptation of man has not kept pace with the speed of his own inventions so that, instead of being the master of the machine, he is its slave. You have only to think of the influence of modern scientific techniques on methods of warfare to realise this disastrous fact. Yet technical development cannot be stopped or artificially held back. To suggest that industry should go back to the old system of small businesses is to suggest that a traveller from Edinburgh to London should walk or travel on horseback instead of taking the train.

The only way to meet the needs is to adapt ourselves to the new conditions and master the machine so that we can make the most of our lives.

Industrial psychology tries to reduce the difficulties produced by the antithesis between the machine and the human being.

In order to grasp the difference that modern industrial conditions make to the individual workman let us consider an example. Contrast the conditions of the work of a carpenter in a small firm with those of an employee in a furniture factory. In the first case there is a close personal relationship between the head of a small firm and his employees. They know each other well, they have some personal interest in each other's lives and they often enjoy some social contact. Furthermore, the carpenter takes a personal pride in his work, not only to please his employer but to satisfy his own sense of achievement. He identifies himself with the firm. If it is successful he shares in its success as an individual. When things prosper he feels a sense of importance and satisfaction, he has kept the spirit of the medieval craftsman.

In a large factory, conditions are very different. The personal relationship is restricted to a few people who work in the same room or department. The temptation to do the work with the minimum of effort is great; there is little, if any, encouragement to personal pride in the work, and the employee is often conscious that he is more a number than an individual.

There are other differences. A carpenter in a small firm is

familiar with all the details of the business. He is not only capable of making single parts of a table but also of putting them together and completing the whole job. He knows the firm's customers, etc., he knows the lines on which the firm works and in some degree shares the owner's problems. The factory employee, on the other hand, is usually restricted to one and the same sort of work, he may spend all his time making only a part of an article, perhaps the legs of a table. He often does not see the finished product, and is usually only concerned with the small section of the factory in which he works. I do not need to emphasise the monotony of this kind of work—it is obvious.

Another difference between the large factory and small firm is the speed which is a factor of mechanisation. Maximum output in the minimum time governs factory work. This is absent from a small firm, where precision and efficiency are equally necessary, but the tempo is slower.

Physical conditions are also different. A large factory with many employees and highly powered machinery is necessarily a very noisy place. There are also differences in the amount of air and light available.

The whole question of the giving and taking of orders is quite different. In a small business a high degree of co-operation makes orders and rules more easily acceptable.

There are many points I could make, but many of you have had personal experience, and time is limited. It may be argued that though I have correctly described the prevailing conditions, yet they are an integral part of factory life and cannot be altered.

The answer is that conditions can nearly always be changed if there is a strong desire to change them. Though the industrial psychologist cannot advise the abolition of the conveyor belt he can, for instance, suggest measures which can alleviate the monotony connected with work under such conditions. Organisation of rest periods and club activities, the production of amateur theatricals and the provision of training facilities can help to make the lives of the workers in industry more varied and less arduous. The industrial psychologist encourages these general social activities. As body and mind are closely connected, fatigue and exhaustion are not merely physical symptoms, they also lead to mental disturbances and, conversely, restlessness and irritability lead to physical tiredness. There is no clear line of demarcation between physical and mental symp-

toms. Many model factories have instituted the measures referred to earlier and have found that they work satisfactorily.

In addition to his interest in social welfare work, the industrial psychologist has other functions. One of them is to help in the selection of personnel and managing staff.

In another chapter I stressed the importance of intelligence tests for educational purposes. In industrial psychology, tests have an even wider range. Used with care by experienced workers they form a useful addition to other methods of selection. The question has been raised as to whether selection does not merely serve the employer by finding out ways and means of speeding up production without benefiting the employee. I can only say that the abuse of a method does not discredit the method itself, though it cannot be denied that this and other objections can be brought forward against selection by tests. Experience and careful valuation of test results prevent abuse. There is no experienced tester who believes blindly in his tests without making use of other means of assessment of mental qualities.

It is not only in industry that choice of a career is often left to chance or irrelevant considerations. Many sons follow their father's professions. This may be right in a number of cases but it does not follow automatically. Others take a post without having any idea of the nature of the work. Many are influenced by economic considerations, others are indifferent, disinterested, and only realise that they have made a mistake after futile efforts to fit into an obviously unsuitable occupation. Vocational guidance is steadily developing and it is hoped that it will in time reduce the number of failures.

General intelligence tests, as they have been described earlier, form the first method of selection and indicate the lines of classification. Then the field can be narrowed down by the use of special tests which assess such qualities as speed, accuracy, perseverance, manual dexterity and drawing ability. It is also valuable to adapt tests to the special conditions which prevail in the particular occupation, reproducing the conditions of work as accurately as possible.

One disturbing factor that cannot be fully eliminated in testing is training. Whilst an ability can itself be tested, its potential increase by training cannot be properly assessed. This is one of many reasons why it is not possible to rely exclusively on tests. Here we have to use another method. A time

of probation for instance can reveal training potentialities.

Another factor that cannot be replaced by testing is the personal interview. It is extremely valuable for finding out ways of behaviour and it also provides an opportunity for the discussion of personal wishes which have to be carefully considered before a career is finally decided upon. Needless to say, the interviewer should be well qualified for his responsible task.

The selection of people who have to act as leaders calls for particular care. They may be wanted as directors, managers or foremen in industry, or for responsible posts in other professions. In every case where leadership is required a specially careful selection must be made. A high degree of responsibility is among the necessary qualities.

The problem of leadership has been much in the foreground during recent years. Although it is not possible to go into a detailed discussion of the matter, it will be agreed, I am sure, that a leader requires qualities not only of intelligence but of character and temperament and this brings us to an important point. There have been many attempts to assess qualities of character and temperament by tests, but we cannot say that we have achieved encouraging results. This fact is not surprising since these qualities do not show themselves easily in artificially produced conditions. There have, however, been some developments during recent years which are beginning to improve our methods. War psychiatry has made use of special methods in officer selection, a team of experts trying to obtain an insight into the whole personality. This was only possible because the examiners lived together with the candidates for some days and had ample opportunity of observing them under different conditions and studying their reactions. War psychiatry will probably provide us with much useful material which can be transferred into civilian life in a form modified to suit the different conditions. The method used in selecting officers is likely to be a model for future development.

To conclude I would say that the industrial psychologist can also give advice on running a business, on advertising and salesmanship. Efficiency in these fields depends largely on psychological principles and they should therefore be considered and applied.

Psychology as described in this chapter has a great future if it is applied with knowledge and with care, avoiding abuse. Its range may widen and benefit many thousands of people.

DELINQUENCY

Psychology and criminology have many interests in common, and it is therefore not surprising that research in recent years has increasingly concentrated on investigations of their interrelation. There is no doubt that society has to be protected against trespassers. There can be no proper community life without rules and regulations. Freedom loving countries object to strict regulations, but freedom for the majority can only be preserved if a minority is prevented from disturbing the freedom of others. We are all aware that rules and customs are not constant. If we compare the customs and habits of primitive tribes with our own rules of behaviour, we see great differences. From the earliest stages of human community life there have been attempts to differentiate between good and bad, but what is regarded as good or bad assumes different aspects at different times of human development. Living conditions, cultural standards, customs and habits create a general moral code which is accepted by the community at a given time, and this code translated into rules and regulations is a safeguard against those who violate the accepted standards.

The protection of society on the one hand, and consideration of the rights of the individual on the other, depend very largely on our cultural standards and level of knowledge. The more we know about the causes of the violation of law, the better equipped we shall be to establish a social order in which the two contrasting elements, society and the individual, are properly considered in their respective rights.

Modern psychology, having passed through its infancy, can effectively help criminology in understanding the many different factors that play their part in the complex problem of delinquency.

Some people wonder if crime would disappear if we had a perfect social order. Even if we could build up an ideal community, I think there would still be those who would not want, or who would be unable to comply with, the rules which even in an ideal community, are necessary.

The causes of delinquency are not to be found exclusively in social conditions nor are they entirely the result of individual

qualities. Delinquency is the faulty adjustment of the individual to society, and if we want to reduce its frequency we have to get a proper insight into both these factors.

Let us begin by considering the individual criminal. Is there a criminal type, comprising people who are essentially different from others? Is criminality inborn or acquired and if acquired what conditions give rise to it? These are some of the important questions which have been the subject of research during recent years. We are not yet able to give satisfactory and conclusive answers. As in other chapters I think it better to give you an outline of the trends and directions of our research than to make definite statements which are not fully justified.

You will remember that we discussed the *Ego*, the *Id* and the *Super-ego* and their different functions in the personality. You will easily see that there are conflicting desires and tendencies in every one, and there is a constant struggle. The *Ego* has to fight the *Id* and the *Super-ego* has to watch both. Although there are differences in the degree of intensity, there is struggle everywhere. You will remember that we discussed rebellion as a natural reaction in different phases of development; we found obstinacy in toddlers and aggression in puberty, No one would say that the obstinate child is a criminal or the rebel in puberty a delinquent. We can only say that there are tendencies in everyone which are directed against rules and regulations and may, under certain conditions, lead to delinquency.

It is most improbable that delinquency or crime is inborn, the most that can be said is that there may be an inherited weakness in control. It is, however, in accordance with our present day knowledge to find such a weakness caused more by influences during early childhood than by transmitted qualities of character.

Many experts are agreed that the foundation of delinquency is laid in early childhood. Deprivations and treatment either too strict or too lenient within the family produce an insecurity, leading to delinquency. At a time when first behaviour patterns are formed, where parents are the models for the development of relationships with other people, and authority is built up on the example of father and mother, the decision is made, which way development may go. What we described as the happy medium of love and security within the family is of great importance. This is borne out by the fact that broken homes,

step-parent relationships, neglect and lack of family life play a great part among conditions leading to delinquency. These factors point quite clearly to a damaged love situation.

There is, however, still a point that needs further explanation. Why do some children who live under these conditions become delinquents and others develop neurotic symptoms of quite a different nature? This choice of symptom among many possibilities is very puzzling. Sometimes we can give an answer. Think of the correlation between certain character qualities and potential neuroses or psychoses which apparently lie in the direction of the general make-up and are therefore bound to develop along those definite lines, if certain other conditions prevail. It would seem that the choice is dictated by the similarity between unconscious conflicts within the individual and social conditions outside the individual which, by leading to conscious conflicts, give a second wind to the already present inner drive.

Such considerations of a psychological nature have an important bearing on the development of criminology.

There are other problems which have developed new aspects owing to recent psychological discoveries. One is the question of personal responsibility. The law draws a distinction between acts for which the individual is responsible and those for which he is not. If you consider the part the unconscious plays in our behaviour, you will agree that our ideas about responsibility might need revision in order to bring them into line with our increased knowledge. As Mullins has said there are many half-way houses and we might often wonder whether crime is a free choice of a responsible person.

This brings us to the consideration of whether punishment has not to give place to treatment in many cases. Just before the war, two psychiatrists put before the Home Office a report of treatment results of several hundred prisoners. The war has stopped further experiments but I have no doubt that they will be continued afterwards. Further research will have to clarify the part played by mental disease and neurosis. Mental deficiency and other intellectual disorders should have their influence on crime assessed. The relative importance of heredity and environment will also have to be worked out. These are only some of the avenues that ask for further exploration, but when this has been done, we shall be better equipped to classify

the diverse forms of delinquency and decide which need treatment rather than punishment.

Many aspects of legal procedure can be considered from the psychological point of view, for example, composition of juries, prison conditions and other problems of jurisdiction. Society as a whole has to review the position in the light of new ideas. Poverty, slums, enforced unemployment are some of the social factors which help to produce delinquency. As I have said, society is not exclusively responsible for criminality, but neither is the individual, and the better society is organised the smaller will be the number of susceptible people who yield to temptation.

This complex problem has to be tackled from all directions and psychology is one of the avenues which can lead to improved conditions.

It is generally agreed that special attention should be given to the problem of juvenile delinquency. In childhood we are not so much confronted with incurable conditions. The young person can be moulded and formed, habits have not been established to the same degree as in adults. There is therefore greater hope that social tendencies can be counteracted as the process of growth and development has not been completed. The foundations of delinquency are laid in childhood, consequently we have to study juvenile delinquency, if we want to understand criminality in adult life.

I think the great importance of the subject and the fact that I can contribute personal experience might justify some examples. They are selected out of a great number of observed and treated cases, representing typical conditions.

A nine year old boy took a bar of chocolate from a shop. He was caught and brought before the juvenile court. It was found that he lived under very poor home conditions. Father had been unemployed for some time, mother had occasional work. There were five brothers and sisters, some older and some younger than the boy. The family income was not sufficient to buy necessities and certainly no sweets or chocolate. There was an atmosphere of gloom and poverty at home and the boy had not eaten any chocolate for months. I will not go into details but note the poverty factor.

Another case. Several young boys between eleven and thirteen were caught, having broken into a shop, helping themselves to lemonade and food. Some of the boys had been before the court,

others were there for the first time. The main point of interest in this case is that they belonged to a gang. They had as their headquarters a deserted hut in a field where they met regularly. They had meals together which they provided by taking food from home or by stealing. They could steal with a clear conscience but they maintained a strict code of honour among themselves, they never stole from each other.

The next case is a nine year old boy, caught stealing vegetables from an allotment. In court he said he was forced by older boys to do the stealing although he had no intention of doing so. They frightened and threatened him and though he was caught the others managed to escape. I got to know this boy who had been put on probation under the condition of psychological treatment. There was no indication in his character that he had delinquent tendencies. I mention this case because it shows that a child who was not delinquent might act in such a way when under the influence of others who were delinquent.

A fifteen year old boy was put on probation because he had stolen a bicycle. It was not the first time he had appeared on this charge and probation was his last chance, before being sent to an approved school. He came regularly for treatment, this was one of the conditions of his probation, and I had ample opportunity of studying his character. I also visited his home. His parents did not get on with each other. Father drank excessively and left home for periods from time to time. There were several children and this boy was the youngest. The family had only one room and a kitchen at their disposal. There was no space for anything. They all had to sleep together in one bedroom. Under these conditions there was very little pleasure at home for the children. They played in the streets, were neglected and left without supervision. The parents showed themselves uninterested in the boy's case. He was a nice boy with normal intelligence, who got on quite well at school, had friends and enjoyed playing. His great craving was to ride a bicycle. He felt the urge at times so overwhelming that he would steal a bicycle and go for a ride. Later he left it somewhere because he could not take it home.

The authorities have to deal with hundreds of cases of bicycle stealing every year. Each case is different. This case reveals a most unfavourable home atmosphere, and a relatively normal boy with a weakness for bicycles.

Another case. A fourteen year old boy caused his parents considerable anxiety. For the last three years he had been unreliable. He lied with fluency and no sense of guilt. His mother had often noticed that money was missing from her purse which she kept in the kitchen. It started with pennies and later shillings were missing. At first the boy was not suspected but one day he was caught as he was taking the money. Several attempts had been made to influence the boy to give up stealing and all sorts of punishments tried without success. Things came to a head when he stole from other boys at school. The case was reported and matters took their usual course. The boy had an I.Q. of one hundred and twenty-five. He was a charming boy, could talk well, was fond of company, and had a great desire to be in the limelight. He often treated other boys, bought lemonade and sandwiches, and paid for fares. He was generous and popular. As his pocket money was not enough for this kind of behaviour he took money where he could find it. He was the only child in a good home. The parents were honest working people who had great plans for their son and were very disappointed in him. He was rather spoiled.

Unfortunately I cannot describe more cases owing to lack of time but I will conclude with some general remarks. Many conditions have been cited as leading to juvenile delinquency. Broken homes, step-parent situations, neglect or over indulgence, poverty, unemployment, love of adventure and will to power are some of them. Experience, however, shows that these conditions cannot be regarded as specific causes of delinquency. There are broken homes where you do not find delinquency, many stepmothers have brought up boys who do not steal and though poor boys form a large proportion of the delinquents we have children of rich families who are dishonest. Many boys have a craving for adventure but it does not lead them into delinquency.

We can only say that there are some factors that may lead to delinquency under special conditions. Usually there are several contributing factors combining together to produce the situation, but even this does not provide sufficient explanation. The fact remains that in each individual case tangible influential factors can be seen, but an intangible condition seems to start the child on its course on the basis of the underlying factors. Each case needs, therefore, thorough investigation

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and must be treated without prejudice or anticipation. Further research is needed to clarify the complicated conditions leading to delinquency.

Before I conclude this chapter I would like to mention some points of interest. The immensity of the problem becomes evident if I quote one figure. In 1938, 78,463 persons were convicted in England and Wales. 51% were under twenty-one and 36% under seventeen.

The question of intelligence has been thoroughly investigated in the sphere of juvenile delinquency. The percentage of mental deficiency is not unduly high. We find some boys with an I.Q. of ninety or less, but quite often we find average and above the average intelligence. The leaders of gangs show a particularly high level of intelligence. Many people find this surprising. It is thought that intelligent people would learn by experience. We have to remember that intelligence represents only one fraction of the character, emotions and desires often overpower intelligence. Treatment can make use of the intelligence of delinquent children, although the main task is teaching control of urges and giving assistance in other ways.

Delinquency is found more amongst boys than girls. One of the reasons for this is that boys have more outgoing energy, more aggressiveness and more initiative. During puberty, these tendencies get accentuated and lead to delinquency. Psychology is playing a steadily increasing part in dealing with these children. If you remember that it is only since 1908 that the law forbids children to be hanged, and then compare the present system, you will realise the amount and speed of the progress achieved, but there is still need for further improvement. The training of all persons responsible for dealing with juvenile delinquency should be thorough. Not only probation officers but also juvenile Court magistrates should be familiar with the problems that arise. Each case before the Court should have a psychological interview, many should have psychological treatment. Close co-operation among all concerned is necessary if society is to progress towards the solution of this highly important problem.

OUTLOOK

In the course of these lectures we have dealt with the psychology of the individual. We have described the laws of human development and tried to subject them to analysis. As the individual does not exist in a vacuum any individual psychology must necessarily be social psychology at the same time. The young baby's actions are partly reaction to environment and from then onwards the individual can only be properly understood within his surroundings. Group life exists from the beginning. The family is the first group in which the child grows up, kindergarten and school follow. Many other groups connected with occupation, interests, leisure and social institutions are constantly forming our living conditions. Nations are large groups, bound together by common ties. The relationship of nations and peoples are even larger groups, but still groups, connected by economic and other factors.

Group life can be approached from different angles. Sociologists, ethnologists and economists, urged by the wish to gain deeper insight into the complex conditions of human life, have looked beyond the frontiers of their respective spheres of interest and have started discussions with each other on problems of common interest. Psychology wants to play its part in the team of experts and feels itself qualified to do so. There is hardly any sphere of personal or social life into which psychology does not enter in one way or another. Philosophy, religion and art are some of the regions from which lines of communication lead to psychology and *vice versa*.

There have been two world wars in the present century. Consequently for many years our thoughts and actions have been influenced by war conditions which have overshadowed many useful activities.

There are people who think war inevitable. They argue that there have always been wars and from this that there always will be. Inborn tendencies of self-preservation, aggression and will to power clash with the same qualities in others and the result, they say, can only be war.

Psychology in co-operation with other branches of science can help to investigate this vitally important question. I am

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of the opinion that in this case it would prove that the above conclusions are wrong. Economic, sociological and psychological factors are all inter-related and are important in deciding whether peace or war conditions shall prevail.

Mass psychology has played an inglorious part in setting up and maintaining the Nazi regime by systematic propaganda. Psychology of leadership has been abused in building up a powerful tyranny which has caused widespread suffering.

But psychology can be used in the opposite direction. Mass psychology could be instrumental in spreading valuable doctrines, and leadership could be exercised in the moral sphere.

At the time of writing the war in Europe has come to an end. After years of systematic destruction on an unprecedented scale we can again hope to rebuild a better world. Psychology, if given the opportunity, can play an effective part in this immense task, so vital to the future of the human race.

