Chas Jamieson

THE EDUCATION OF BEHAVIOUR

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A PSYCHOLOGICAL STUDY

BY

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PREFACE

This little book is an attempt to bring our present knowledge of psychology to bear on the problems of behaviour which have to be faced by those who are in charge of boys or girls during their adolescence. It is intended primarily for the student of education who wishes to teach young people between the ages of nine and seventeen, but it is hoped that it will also appeal to parents, as well as to foremen and social workers who are interested in the welfare of adolescents.

The reader who is acquainted with the literature of the subject will see how much my exposition owes to Professor McDougall's *Social Psychology*, and to the standard books on analytical psychology. At the same time, I have not scrupled to give my own explanation of a psychological phenomenon when I could not find one which seemed to satisfy the conditions as I saw them. Since the book is intended for the beginner, I have, however, contented myself with stating where my view is not the one which is generally accepted, giving the reader at the same time such references as should enable him to make up his own mind on the

subject. Lengthy discussions of different points of view seem to me to be out of place in a book of this kind.

The references which are given in the text will indicate to which writers I am most indebted. Unfortunately most of the book was written before I had the opportunity of reading Professor Nunn's *Education, its Data and First Principles* and Miss Alice Woods' *Educational Experiments in England.* This accounts for the fact that the text contains no references to these interesting books.

In conclusion, I should like to thank Miss E. R. Murray for many helpful suggestions, and to express my great obligation to Miss Alice Woods and to Dr. Stanley Watkins for reading the whole of the manuscript and for giving me much valuable criticism and advice.

I. B. Saxby.

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CHAPTER I

INTRODUCTION

Education as preparation for efficient citizenship.
Citizenship as the joint product of natural power and environment.

STATED in its most general terms, education may be said to be preparation for adult life, and this in turn may be described as preparation for efficient citizenship. If we are now asked what exactly is involved in this, we cannot do better than turn to *Herbert Spencer* for an answer. In his book entitled *Education: Intellectual, Moral and Physical*, he points out that the ideal education of a citizen should include: (1) that which prepares for direct self-preservation; (2) that which prepares for indirect self-preservation; (3) that which prepares for parenthood; (4) that which prepares for citizenship in the narrower sense of the word; and (5) that which prepares for the miscellaneous refinements of life.

To put the same thing in different words, an efficient citizen should be *able and willing:* (1) to keep himself fit and in good condition ; (2) to do his share of the world's work ; (3) to give his children the necessary care and training ; (4) to do his duty by his neighbours ; and (5) to occupy his leisure in such a way as to provide a desirable outlet for those of his longings which would otherwise remain unsatisfied.

It is the object of this book to give the student some insight into the conditions under which he is likely to succeed in turning his pupils into efficient citizens in the sense just defined.

At the outset it is important to determine how much responsibility rests on the child and how much on the educator, for our whole attitude towards the problem necessarily depends on our answer to this question. If the child's mind is of the nature of a waxen tablet on which we can write what we like, then the environment must be entirely responsible for the result ; if heredity practically settles the child's future at the outset, then it is useless to attempt any sort of interference. As usual, the truth appears to lie somewhere between these two extremes. The natural endowments of the child present as it were the sum total of his possibilities, but it depends on the environment how they develop, and far more persons fail through lack of right

environment in youth than through lack of inborn ability.

In order to see how heredity and environment act and react on each other, we shall begin with a brief investigation into the origin of standards of conduct and attainments. Superficial observation may suggest that these two important "springs of action" have come into existence in absolutely different ways, for we can remember acquiring most of our attainments by conscious efforts of our own, whereas many of our standards of conduct seem so much part and parcel of ourselves that we are sometimes tempted to think we must have been born with them. However, further reflection soon shows that both are really the joint products of natural power and environment.

I will consider attainments first. The knowledge which a child acquires at school depends partly on himself, but much more on the school. He may, for instance, have only slight ability for mathematics, and yet learn more than another with greater natural talent, merely because he happens to have a better teacher. Even exceptional ability may never develop in an unfavourable environment, for we need opportunity to discover what we can do, and we may exhaust ourselves in overcoming real or imaginary obstacles when we *have* discovered it.

In the sphere of conduct the conditions under

which a child grows up are even more important, for the young child has no inborn ideas of right or wrong, and has therefore to acquire them through personal experience. It should be noted, too, that this "personal experience" is only his own in a very limited sense. He can be allowed to find out for himself that fire burns, but not that certain berries are poisonous. In this and many other cases his discovery is limited to the fact that we approve or disapprove of certain acts, and he has to take on trust that we know better than he, or that the reasons which we choose to give him are really correct. This is particularly the case with conventions. Why, for instance, should you say "Please" and "Thank you" at every turn? It would puzzle the average adult to give the child of three to five an answer that would really convince him; yet the child often shows by the tone of his voice that he is anything but satisfied. None the less, he usually acquiesces in the end, partly no doubt because he is so dependent on us, but perhaps mainly because he is continually being made conscious of the superior knowledge and power of his elders, and is therefore inclined to assume that they probably know best in every case, however incomprehensible their demands seem to be. Thus he gradually adopts the standards of conduct which are accepted in his environment.

For most persons there comes, however, a time —usually during adolescence—when they begin to mix with others whose standards of conduct differ more or less from their own, and whom they have yet every reason to respect. Then one of two things may happen : they may learn to close their eyes to everything that threatens their peace of mind ; but, failing that, they must modify their views sufficiently to enable them to fit into the old what they feel to be true in the new. Whichever path the adolescent chooses, he is now for the first time actively affecting his standards of conduct and his beliefs. It is, however, well to bear in mind that most of us would grow up without ever questioning the absolute finality of what we had been taught as children, if we did not come across others who have been taught to think differently, and are therefore not prepared to accept our point of view. Thus our standards of conduct seem to be derived almost entirely from our environment. They are, however, not sufficient to decide behaviour alone, for right action involves a knowledge of what is right *coupled with* the desire to act in accordance with that knowledge, and it is possible to approve of a certain course of action without experiencing the least desire to adopt it. We have therefore still to consider how far this desire is dependent on the environment.

This problem will be considered in detail at a later stage. Here it is sufficient to note that our desire to control anti-social wishes springs in the main from our desire to win the approval, or at least to avoid the disapproval, of those whose opinion we value for any reason. In adult life, we may ignore the wishes of such persons on occasion because we think that we know the facts of the case better than they do, because we imagine that we are sure not to be found out, or because our desire is so great that we cannot withstand it. During the early years of life the first of these is rarely a cause of disobedience, for a child is continually being made aware of his own weakness and ignorance, and is therefore not likely to question the opinion of his elders. It should therefore be a comparatively easy matter to teach children what is right and what is wrong and to make them want to do right. All that is needed is to win their love and respect, then the rest should follow almost automatically. Yet we fail again and again. What is the cause ? There is certainly no lack of goodwill on the part of the child, at any rate initially. Those of us who know children intimately know that they will try to do the most unreasonable things in order to please those they love. Here is a case in point. A little girl of five or six was travelling with her grandmother from Cardiff to London.

The grandmother told the child to "sit nice and still," and then got out a paper and began to read it. The little girl evidently tried to obey, but she had been provided with neither picture-book nor toy. Needless to say she began to fidget before long. The grandmother asked her once more to keep quiet; then turned to her neighbour and said: "I am always telling her to sit still and she *does* try, but she finds it very hard to remember." It was evident from the attitude of the child that it had never struck her to question the wisdom of her grandmother's demands. She was merely trying to "remember," and possibly rather vexed with herself for forgetting. It must be said for the grandmother that she was wiser than her words; for when the young fidget began again a few minutes later, she simply cast her neighbour a glance which said: "You see, she has forgotten again," and left the child to amuse herself in her own way until she went to sleep through sheer boredom.

Here there was failure on the part of the child, but not rebellion. The grandmother had succeeded in inculcating the desire to sit still, the little girl was merely finding it difficult to obey. She was not defying her grandmother in any sense of the word.

At other times we have to deal with true rebellion. The child disobeys us deliberately

when he cannot possibly have forgotten what we told him to do. We tell him to weed the garden, and he goes off to play with his companions ; we tell him not to climb a certain tree and presently find him ensconced on its topmost branch.

We may take it for granted that the young child who disobeys us in this fashion does not do so because he thinks that he is in the right and that we are in the wrong. He does not as yet question our right to lay down the law. His choice lies between obedience with a good conscience and disobedience with a bad conscience. Yet he may disobey us all the same, and that because the desire for approval is by no means the only desire with which he is equipped. Nature has provided the child with a large number of impulses, or desires to act. There is the impulse to find out about something new, the impulse to try one's powers, and so forth. All these impulses vary in strength, not only in different children, but in the same child at different times, and some chance occurrence may render any one of them so strong that the child is unable to resist it for the time being. The result is disobedience. Under wise guidance such disobedience will, however, only lead to a firm determination not to fail again. It is only when the adult demands too much, when failure succeeds failure, that the child presently decides that

it is no good trying to be good, and that it is less trouble to be naughty and take the consequences. But even in such a case the *young* child does not, as a rule, reject the standards of his environment, for he is still convinced that he is in the wrong. He merely decides that these things are not for him, and thus loses all desire to try to be "good."

The same applies, of course, to the acquisition of knowledge. The child who finds the work consistently too difficult, sooner or later gives up attempting to attend in class, with the result that he does not even learn the little that is within the range of his ability. Under suitable tuition such a child will often discover, to his own surprise and delight, that there are things which interest him and which he can do as well as another. Then lessons become worth while, inattention disappears, and he begins to work at least as hard as his more gifted fellows.[1]

It follows from all this that the environment (including therein both the persons and the things with which the child comes into contact) is to a large extent responsible for the ideals and attainments of the child, but that it is not all-powerful. You can take the horse to water, but you cannot make it drink. So, too, you can give the child

[1] I have been definitely told by such a child: "I was always supposed to be hopelessly stupid."

the opportunity to develop right ideals or to acquire necessary knowledge and skill, but you cannot force him to make the effort against his will, nor to learn more than his natural ability will allow him to learn. The environment of any child represents as it were the sum total of the possibilities that fate has provided for him. If it includes a wise educator, one who knows how to stimulate right desires in the child and to make him want to control undesirable impulses, his chances of success will be by so much the greater. But in the end it is the child himself who must acquire the knowledge and the ideals which he will need if he is to become an efficient citizen. He must be active, not passive; an individual who uses his environment to develop his powers and organise the impulses with which he is born, not a mere phonograph that will reproduce faithfully whatever is said into it.

CHAPTER II

IMPULSES AND REFLEXES

A. Definition of Impulse as an Inborn Tendency to Seek a Certain End in Certain Situations.

B. The Effect of Blocking the Usual Outlets of an Impulse.

C. The Relation of Emotion to Impulse.

D. Definition of Reflex as an Inborn Tendency to React in one Specific Way to one Specific Stimulus.

E. The Relative Survival Value of Reflex and Impulse :—
(1) In a fixed environment, and (2) in a variable environment.

We saw in the last chapter that the student of human behaviour is primarily concerned with the origin and growth of desires. It will, however, be necessary to do some preliminary work before we can understand the problems connected with this subject. We shall, therefore, study impulses and reflexes in this chapter, and return to the psychology of desire at a later stage.

A. *The Definition of Impulse*

Impulses are many and varied in character. If we think we are in danger, we want to run away ;

if we see something strange, but not too strange, we like to examine it; if we are faced with an obstacle, we want to surmount it. All these desires are due to *impulses*, that is to say, to inborn tendencies to act in a certain way under certain conditions. It is characteristic of an impulse that it urges us to some mode of action which seems for the time being absolutely obvious, though we could often give no satisfactory reason for our behaviour. Further, the true impulsive act is always conscious. I may blink and breathe without knowing it, but I do not run away unless I am conscious of danger. It is convenient to use the word *perceive* for being aware of an object, no matter whether we hear it or see it, touch it or smell it, etc., and to call the thing that has been *perceived* in this way a *percept*. An impulse is, therefore, an inborn desire to attain a certain end in the presence of certain kinds of percepts. It should, moreover, be observed that the actual percept is not always necessary, at any rate in the case of human beings. Thus the candidate for an examination may be so afraid of failure that he decides not to sit for it: here it is not an accomplished fact, but the mere thought, "I shall not pass," which is responsible for his action. The actual percepts or ideas that are able to arouse a particular impulse vary greatly from person to person and from day to day, but it is none the

less possible to classify them. Thus the impulse to avoid danger is roused by every percept which suggests danger, but it depends on the previous experience and knowledge of the individual whether a particular percept does or does not have that effect on a particular occasion. For instance, the sound of an aeroplane normally causes no more alarm than that of a passing motor; during the air raids it was, however, impossible to hear it without experiencing at least a momentary pang of fear.

Moreover, the means which are chosen to attain the end of the impulse are also liable to variation. It may be well to run away literally if we wish to escape from danger, but it may be safer to hide, or to tell a lie, or to ask for mercy. So, too, we may examine a strange object ourselves, or we may consult either a book or another individual about it: whichever course we adopt we are satisfying our impulse to investigate.

In general there are a large number of percepts that may arouse a given impulse and a large number of acts through which any one impulse may seek to attain its end. It will, however, always be found, both in regard to the different percepts and ideas and in regard to the resulting acts, that they belong to definite classes (*e.g.* things that are dangerous or methods of

escape), and that they owe their connection with the impulse to the fact that they are, for the time being, members of the corresponding class.

We may, therefore, define an impulse as follows: *An impulse is an inborn tendency to seek a certain end in certain situations.* (It makes us want to avoid danger, to remove obstacles from our path, etc.) *It is roused by all percepts and ideas which seem to the individual to suggest one of these situations, and it may seek to attain its end by any of the means which he has learnt to use for that purpose.*

B. *The Effect of Blocking the Usual Outlets of an Impulse*

When the usual outlets of an impulse are blocked, one of two things may happen: the individual in question may feel that it is hopeless for him to try to get what he wants, or he may think he can overcome the obstacle. In the first case the nervous energy that has been set free by the percept tends to be driven into some unhealthy channel, such as worrying, fussing or self-pity, all of which use up energy without producing results of any value. In the second case it is expended in attempts to attain the end of the impulse by removing the obstacle. It must not, of course, be imagined that the choice of one or other of these alternatives necessarily

involves deliberation. Often circumstances make it obvious whether it is or is not worth while to assert oneself: a child of four will fight another child of his own age who tries to spoil his game, but he will merely cry helplessly if a boy of twelve chooses to bully him. If there is actual danger to life and little chance of escape the individual will, however, often fight, even though he knows that his case is desperate. Thus the criminal who is caught red-handed will at times aggravate his offence by trying to kill his captors.

The weapons we use in the fight necessarily depend on the obstacle we have to overcome. Sometimes mere physical strength is all that is required: we fight with the fist, the spear, or some more modern weapon. But these are often insufficient by themselves; they may even be useless. Suppose, for instance, that I want to solve some mystery and find I cannot do it. My curiosity may be too strong to leave me in peace, my pride may be involved as well, so that I am determined not to be *beaten*. In such a case I begin to *cudgel my brains*. I bring all my knowledge and all my power of synthesis and analysis to bear upon my problem. I work at it until I either solve the mystery or am *forced* to give it up as a task beyond my powers. It is worth while to notice the metaphors we use in this connection. "To be beaten," and "to

cudgel," and to be "forced" to do a thing are evidently all taken from the act of fighting. And this is true to life; the process does feel like a fight whenever we are finding it difficult to solve a problem, and most of us have reason to know that defeat in such a case may mean a loss of self-respect which is quite out of proportion to the importance of the task in which we have failed.

We may, then, state generally that *an obstacle to the free functioning of any impulse normally produces an impulse to overcome that obstacle.* It is only when success appears to be out of the question that the individual tends to give way without a struggle. As for the weapons we use, they naturally vary with the needs of the case and with the means at our disposal. At different times we may have recourse to our fists, or to our powers of verbal expression, to an elaborate engine of war, or to a fine scientific instrument, and our use of any of these may be guided by a highly trained or by an absolutely untrained mind.

C. *The Relation of Emotion to Impulse*

So far we have discussed impulse as though it only involved the percept that sets it in motion and the act by which it seeks to attain its end. A moment's consideration will show that this is not true to life. Take the case of a person who is running away from a mad bull. He is

obviously actuated by the desire to avoid danger, and at first, while he is running at the top of his speed, he is probably aware of little but the bull behind him and the gate at the end of the field. But suppose that the gate proves insurmountable, or that his strength fails him before he is able to reach it. Then his original form of reaction, that of running away, is checked, and he is likely to experience an acute attack of fear, unless an alternative form of activity happens to present itself almost immediately. Similarly, the person who is overcoming his opponent in a fight is not likely to experience much anger, whereas the one who is being worsted in the conflict, and who is therefore not able to satisfy his impulse to assert himself, will probably feel angry both during and after the event. The reader will easily collect other examples to the same effect. We are thus led to conclude that *an emotion tends to be produced when more energy is set free by the percept than is used up in action.*

It is a matter of common knowledge that each of the well-known emotions is a characteristic phenomenon which only occurs in connection with one particular impulse. The question thus arises whether *all* impulses are liable to be accompanied by specific feeling tones. The first thing to observe in this connection is that popular usage has at any rate not provided

them all with names for their feeling tones. We are, for instance, endowed with an impulse to construct. It appears very early, in the young child's love of making and building things, and seems to persist through life if too much energy is not absorbed in the mere struggle for existence. We see signs of it in every well-kept suburb garden, in the make-shifts that some of us like to invent for our own use, and in the pleasure that others take in designing or making their own clothes. The impulse to construct is therefore a fairly strong and a well-established impulse ; yet popular usage provides no special name for any feeling tone connected with it. We just say that we enjoy making things, and do not differentiate the special form of enjoyment any further.

If there is, none the less, a special feeling tone, we should become aware of it when we try to recall our state of mind during the process of constructing immediately after the impulsive activity has come to an end. If we do this, we shall, I think, find that the pleasure we take in "making for the sake of making" has a special flavour about it which differentiates it from all other pleasures. Often, no doubt, the actual pleasure we experience is mixed with others, such as that derived from admiration, but at times (*e.g.* when engaged in certain hobbies) it is

difficult to account for our occupation in terms of any impulse other than the impulse to construct. Any one who has worked under such conditions knows that the pleasure we experience on these occasions is, if anything, increased by the absence of ulterior motives. It is a characteristic experience, which belongs to the same genus as the emotions, and it has only not been differentiated from other forms of enjoyment because it is so much less intense than anger or fear. It seems probable that other impulses, such as the impulse to collect, are also accompanied by characteristic feeling tones when more energy is being set free than can be used in action, and that these, too, have not risen to the dignity of a special name because they are experienced in so slight a degree that they do not attract the attention of the man in the street.

D. *Definition of Reflex*

We saw above that neither the percepts which rouse an impulse nor the acts by which it seeks to attain its end are fixed at birth. If we find that a certain percept is not followed by pain, we no longer seek to avoid it ; if we fail to attain the end of an impulse by one form of activity, we are able to try another on the next occasion.

We have now to turn our attention to a form

of activity which is also inborn, but which differs from the impulse in that it is fixed in every detail at birth, and is therefore either not at all or only indirectly under our control. We can make the heart beat more quickly by running, but we cannot change its rate by an act of will. We can hold our breath for a while, but the strain soon becomes too great for us. No amount of practice will prevent our starting at an unexpected noise or blinking when the wind blows dust into our eyes. And there are countless movements going on within us of which we do not even become aware unless we happen to take up the study of physiology.

All these forms of reaction may be classed together for our purpose. Different as they are in some respects, they all have the one point in common, that they are fixed more or less completely at birth, and consequently either predetermined in every respect or only educable within comparatively narrow limits. When a form of behaviour is fixed in every respect it is usually called a "reflex." *A reflex may therefore be defined as an inborn tendency to react in one specific way to one specific stimulus or set of stimuli.*

E. *The Relative Survival Value of Reflex and Impulsive Activity*

Of the two forms of activity, the reflex and the impulsive, the reflex is undoubtedly the more primitive, for it achieves its end without even needing awareness on the part of the individual, whereas the value of impulsive activity depends on the power to learn from experience. The very fact that it is fixed in every detail means that a reflex ensures the well-being of the animal in the environment in which it originated; but it does this at a great cost, for the very fact that all its reactions are fixed at birth makes it impossible for the reflex animal to adapt itself to a change in its environment. Thus even a slight development in power to learn from experience gives an animal a tremendous advantage in the struggle for existence. Such a development is, however, only useful in the case of a particular reaction, if that reaction is of such a nature that its survival value is likely to vary with changes in the environment; otherwise the reflex is really more serviceable just because it does not depend on the whim of the individual. Accordingly the extent to which a creature is left to learn from experience increases greatly in the higher forms of life, but at the same time adaptability is only developed in any particular case in so far as the animal is

likely to be able to make use of it. The chicken's breathing is reflex, and therefore uneducable. His tendency to pick up caterpillars and worms is also inborn, for he does it successfully at the first attempt and feels impelled to do it when he has had no opportunity of learning it from another chicken. Yet this act is partially educable, for the chicken can learn through experience that certain yellow and black caterpillars are unpalatable, and therefore best left alone (Lloyd Morgan, *Comparative Psychology*, p. 214).

In the human being all stages of development can be observed. Blinking is an instance of pure reflex activity, for it is quite uneducable. In coughing there is a little control : if the stimulus is not too strong, the individual can restrain his tendency to cough until the irritation has passed away. In talking we see a further development of the power to adapt behaviour to the needs of the environment, for there is only an inborn tendency to produce sounds of some kind with the vocal cords : the child who is born deaf does not learn to speak because he does not hear others speak, though he will, unknown to himself, produce sounds under the influence of emotion. Finally, true impulsive acts like fighting depend entirely on the environment for the form they take ; in these the individual is merely endowed with the desire to attain certain ends in regard to

certain situations, and is left to learn all else from experience (cf. below). For our purpose there will be no need to consider reactions which are intermediate between the pure reflex and the true impulsive act, for they affect our behaviour like impulses in so far as they are educable, like reflexes in so far as they are not educable. At times the same end is attained by impulsive or by reflex activity according to the circumstances of the case. Thus our personal safety is secured not only by the impulse to avoid danger, but also by the reflexes which make us start at a sudden noise and look round at a moving object. It is interesting to note that only reactions which are always useful are reflex in such a case.

The reader may think that there are certain specific reactions connected with every impulse: the tendency to use one's limbs with the impulse to fight, the tendency to run away with the impulse to avoid danger. It can, however, be shown that this assertion is at least open to doubt. During the first months of his life the baby necessarily learns that some things move if he presses against them, with the result that he presently tries to push away the people and the things which he does not want. As he grows older the push increases in force. Sooner or later it is directed against his equals, and thus produces a counter-push. Then the result is a fight. The

tendency to run away from danger is probably also based on early experience. As soon as the baby becomes aware of his mother, he must realise her as the person who removes pain and discomfort. At first he can only cry when he wants her and must wait until she chooses to attend to him, but as soon as he has learnt to run he can go to her, if she does not come at his call. Then for some time he runs to her whenever he is frightened. However, there comes a day when he feels in need of protection and fails to find either his mother or a substitute for her. On such an occasion he is likely to discover that the running away was useful in itself, and from that it is only a small step to adopt running away as a mode of avoiding danger. Other cases could be worked out on similar lines. Thus there seems to be no need to assume that any of the specific means of attaining the end are innate in the case of an impulse. In other words, an impulse seems to be designed to secure the maximum of adaptability by leaving it to experience to teach the form of reaction that is most suited to different situations. We shall see later that at any rate two of the impulses are provided with reflexes which prepare the body for the extra strain which is likely to be thrown upon it when the safety of the individual is endangered. These are, however, of use in every situation of this nature, and therefore in no

way concerned with the special means by which the individual seeks to attain the end of the impulse.[1]

[1] It is usual to class certain innate tendencies together as "instincts." There is, however, so much diversity of opinion among psychologists with regard to the definition of "instinct" that the writer prefers to do without the term altogether.

CHAPTER III

SOME IMPORTANT IMPULSES

(1) The Impulse to Avoid Danger.
(2) The Impulse to Assert Oneself.
(3) The Impulse to Fight.
(4) The Impulse to Seek a Mate.
(5) The Impulse to Protect the Weak.
(6) The Impulse to Investigate.
(7) The Impulse to Collect.
(8) The Impulse to Construct.

If we examine the impulses with which we are endowed, we find that many of them are connected directly with self-preservation. We feel impelled to take food when hungry, to fight those who try to rob us, to avoid danger and so forth. There are, however, other impulses which do not act in the same way. The mother's impulse to care for her offspring (or the parental impulse, as it is usually called) is a case in point. If it is strong, it will make the mother starve herself or fight against impossible odds, rather than let her young ones suffer. If it is weak, she will abandon them in the hour of danger and thus

save herself at their expense. Hence the parental impulse may make for race preservation at the expense of self-preservation. As will be seen in the course of this chapter, there are other impulses which seem to resemble it in this respect. In short, the life of every individual seems to be governed by two main forces: one which urges him to keep himself alive and well and another which urges him to act for the welfare of his race. Moreover, the various reflexes and impulses seem to be nothing more than so many tools which these primary forces have evolved for themselves in the course of the struggle for existence.

Although every impulse owes its existence to its survival value, it must not, of course, be imagined that the individual is necessarily, or even frequently, conscious of the forces that are at work in any particular case. Among all animals, the individual who loses his desire for food normally starves to death; among the higher animals any species which lost the parental impulse would rapidly cease to exist. None the less, the average individual never gives these matters a thought. Unless we are in poor health, we eat because we want to eat, not because it is good for us, and the normal mother looks after her child because Nature makes her feel that it is the one thing she wants to do, not because she is interested in, or has even thought about, the welfare of the race.

It is only reflection on what we see around us that teaches us that reflexes and impulses must have been evolved in the service of self-preservation and race preservation.

The rest of this chapter will be concerned with the study of such impulses as are of importance to the educator. The reader will find that some of these are obviously self-preservative, whereas others are as obviously race preservative. Some, such as the impulse to investigate, might, however, fall equally well under either head, and we do not as yet know enough about impulse to classify these with any certainty. It has, therefore, seemed better not to attempt to arrange the impulses in any particular order.

(1) *The Impulse to Avoid Danger*

Strong within us all is the impulse to avoid danger and pain. If the reader doubts this, he is advised to try to prick himself with a needle so as to draw blood. He will be surprised to find how much resistance he will have to overcome in order to inflict on himself so small an injury. It is true that the more intelligent among us do at times expose ourselves to avoidable pain, but it will be found on inquiry that our object is then merely to save ourselves more intense pain in the future. Such, for example, is our reason for submitting to the ministration of the dentist and

for working at a compulsory examination subject for which we have neither taste nor talent. Still occasionally the impulse to avoid pain does appear to be truly in abeyance for the time being; thus the soldier will risk his life to save a wounded comrade and the mother will starve herself to have enough food for her child. All the same, it must not be imagined that either the soldier or the mother is therefore free from the capacity to fear pain. They are temporarily unaware of, or unconcerned about, their personal needs, because another stronger impulse is absorbing all their energy. Once that is satisfied, they will be found to be as anxious as their neighbours to escape avoidable pain and danger. The impulse to avoid danger and pain, and the accompanying emotion of fear, are clearly important factors in the make-up of every individual. Their biological value is too obvious to need discussion. No doubt, some are frightened more easily than others, but no normal person is entirely free from the tendency to feel afraid.

It is interesting to speculate whether any percepts produce fear innately, or whether all our particular fears are due to experience. (As pointed out above, the start at a sudden noise is of the nature of a reflex, because uneducable.) Fear of strangers is very common as soon as a baby begins to distinguish the members of the

household from other people, fear of the dark often seems to develop, in spite of all precautions, as soon as the imagination begins to become active ; but whether these are not both merely special cases of the fear of the unknown, is at least open to question. Finally, fear of the unknown may well be the product of experience combined with the tendency to generalise which is so characteristic of children. Hence it would seem that a child is born with no special fears, but learns to fear things which have actually produced pain or which seem to him to belong to the same class as these.

However this may be, the child has undoubtedly acquired a number of special fears by the time he goes to school. Since they are caused by the environment, these fears will, of course, vary from child to child and from place to place. The country child is more likely to be afraid of tramps, the town child of burglars ; both may be afraid of punishment, of being bullied by certain other children, or of witches and hobgoblins.

Moreover, it is not only the percepts which develop under the pressure of the environment. The same applies to the methods by which the child tries to escape from pain and danger. Thus experience will have taught one that the best way to escape punishment is to tell a lie, another will have found it more effective to burst

into tears, another to coax, and here and there a lucky child may have discovered that if only he owns up manfully, the adult will understand and will not inflict some arbitrary punishment which is severe enough to produce real fear.

The education that was begun at home is now supplemented at school. As his experience increases, the child begins to lose or modify some fears and to develop others, and again it depends on his environment whether he learns to be afraid of the right things. Foolhardiness may be taken as a case in point. The foolhardy boy seems to expose himself to serious danger for the mere joy of trying his powers, with no thought of what would happen to him if he made a false step. In the young child this tendency is often more apparent than real, for he does not yet know what is dangerous. Hence he grows more careful as his experience becomes wider. He will, of course, continue to do things that involve a certain amount of risk, for a slight degree of fear adds to the spice of life ; but he will be careful to avoid anything that is likely to do him serious harm. Occasionally, however, we come across an adolescent whose exploits can only be described as foolhardy : it seems as though he had no fear, no idea of self-preservation. If we watch such a one closely, we shall find that his acts are done in a way which is calculated to attract the attention of

others. There must be some admiring schoolfellows who will see him accomplish his feat or at least hear about it, or, failing that, an adult who will scold him for it. In other words, his foolhardiness is due to his desire to attract notice, and it is therefore the environment that is to blame for it.

Modern psychology has proved conclusively that an impulse cannot be killed. All that can be done is to divert its energy into different channels. A boy may turn to foolhardiness because he cannot satisfy his desire to assert himself in any other way. This desire is in itself normal and healthy. All it needs is a suitable outlet. If such a boy is, therefore, made to feel that he cannot attain his end by foolhardiness, and if he is at the same time provided with suitable means of satisfying his sense of his own importance, he will readily turn his energy into more profitable channels.

(2) *The Impulse to Assert Oneself*

The impulse to insist upon one's rights is evidently as important to self-preservation as the impulse to avoid danger. In a primitive community, at any rate, the individual who is not prepared to stand up for himself is likely to be deprived of anything which he has and which his fellows happen to covet, and even if he grows

up in a community where this is not the case, he will be at a serious disadvantage if his desire for self-preservation is not of normal strength, for the wish to prove ourselves as good as our neighbours makes us try our powers both on persons and on things. Thus we learn our limitations, thus too we are first impelled to acquire the skill or the knowledge which seems to give others an advantage over us, but which is not in itself sufficiently strange to arouse our curiosity.

It has often been observed that a child tends to be a thorough-going egotist from the age of four or five to that of ten or eleven. If we listen to his talk we find that he is at all times occupied with himself. His conversation is full of *I*, *Me* and *My*. If there is something good to be had, he wants it all, and finds it hard to believe that his younger brother really has as good a right to it as he. Yet that same child could be charmingly unselfish at the age of eighteen months or two years. Then he would, at times, be quite pleased to see his brother eat a piece of chocolate, and would display no desire to have it himself. Now he would consider such an arrangement most unjust. It may almost seem as though something had been lost between the ages of two and four. As a matter of fact, just the reverse is the case. The child of two is sometimes unselfish because he has not yet fully realised himself as

an individual. In so far as he has realised himself, he will be found to be at least as selfish as the child of five.

The contrast between self and non-self is acquired gradually through experience. The first glimmerings of it must arise in the mind of the tiny baby when he discovers that his toes are his own in a sense in which his bottle and his nurse are not. As he grows older the child gets an idea of himself as a person who can walk, who can ask for what he wants, who is clever or stupid, good or naughty, as the case may be. Moreover, whatever his opinion of himself, he is at this stage primarily interested in himself. And it is good that it should be so. He must understand himself at least superficially before he can attempt to understand others, and he must have had struggles of his own before he can sympathise with their difficulties.

At times he may become unpleasantly self-assertive, but that is entirely the fault of the environment. To take a case in point. A very bright little girl of six was in the upper transition class of a kindergarten, but was considered too young to be moved to the first form. She began to rule the roost with a vengeance. Every child in the class had to obey her. There was no peace if she was not the leader in every game. Finally the school authorities were persuaded to put her into

the first form in spite of her youth. There was a change almost alarming in its suddenness. Our young mischief-maker became docile and amenable, ready to take any part that was assigned to her by the others in their free play. If we provide the right companions and the right standards, the child will never have the opportunity to think himself abnormally clever, appreciation will only spur him on to further effort, and his very self-assertion can be used to teach him a certain amount of consideration for others.

As the child approaches adolescence he becomes more sensitive to public opinion. If the environment is favourable, he therefore learns not to be too obviously self-assertive. This does not mean that his interest in himself becomes less : that remains throughout life one of the primary forces which urge us to make the best of ourselves. All that happens is that the small displays of power which please the young child are no longer good enough for us as we grow older. We need something more : things that may take us years to achieve, that may mean months of uncongenial work, but that are intended to prove to ourselves *and to others* that we are persons of some consequence. And if an individual fails to discover an outlet of this kind, we find him seeking one in acts of petty tyranny, in foolhardiness, in hare-brained schemes that would not stand ten minutes'

unprejudiced criticism, or in some form of unhealthy suppression, such as abnormal sensitiveness to the opinion of others.

(3) *The Impulse to Fight*

Closely allied to the impulse to assert oneself is the impulse to fight. If our opponent refuses to give way, and if he is not strong enough to arouse our fears, then our self-assertion impels us to fight him. As was pointed out in Chapter II, the obstruction of any impulse may make us fight, but probably self-assertion is roused whenever the free functioning of an impulse is checked by a preventible cause, so that it is more correct to say that self-assertion is the immediate cause of pugnacity. Beyond this, it is at this stage unnecessary to add anything to what was said in that chapter.

(4) *The Impulse to Seek a Mate*

The mating impulse, the impulse which drives each fully developed individual to seek a mate, is undoubtedly the most primitive of all race-preservative impulses. Only among the lowliest organisms is there as yet no need for it. Thus the microscopic amœba simply divides into two equal halves when it has grown to a certain size. Each of these halves then continues its independent life, and grows on until it in turn has reached

its limit of growth and divides. In other simple forms of life the young individual grows on the parent until big enough to shift for itself. In others he begins life as a single cell or spore. In all these cases a single parent is sufficient to produce the new individual.

Very early in the story of life Nature seems, however, to have discovered that better results are obtained by making the production of the new individual depend on the collaboration of two parents, and gradually these two parents have become differentiated into what we know now as male and female.

Along with this differentiation of function there must have developed an impulse to drive the two sexes to seek each other, since a species would necessarily become extinct if it lost the power of individual propagation without acquiring this impulse. The mating impulse is, therefore, one of the most ancient and well-established of our impulses. It may perhaps be worth while to insist once more that there is no thought of race preservation, even in the minds of human beings, when the impulse functions normally. The individual experiences nothing beyond a more or less intense longing for some member of the opposite sex, and race preservation is about the last explanation he would give, if called upon to account for this longing.

To sum up, natural selection, acting through untold ages, has caused the mating impulse to become one of the strongest tendencies with which we are endowed. In its pure form it simply drives each individual to find a mate to his liking without further considerations of any kind.

The stronger an impulse, the more difficult it is to learn to control it wisely, and it is clearly a condition of community life that the mating impulse should be held in check. One would, therefore, expect parents and teachers to give much thought to this difficult subject, but as a matter of fact it is one of the things that both home and school seem to think safe to leave to chance.

It is difficult to say at what age the child would become aware of the impulse of his own accord, because the environment does so much to affect its development. Children watch their elders much more closely than these always realise. In some surroundings children of six or eight may discover that it is "grown up" to be more especially interested in members of the opposite sex; in others they may as readily learn that it is in some way wrong to do so. The one course is as harmful as the other. The former stimulates the impulse unnecessarily, the latter encourages repression and thus exposes the child to the risk of some form of abnormal development. With a

few notable exceptions, our schools usually err on the side of repression, and thereby tend to stimulate the very thing they are trying to prevent.

Unless there is plenty of opportunity for intercourse at home, the average schoolboy and schoolgirl are each somewhat of a mystery to the other. Besides the unknown is always more interesting than the known, since it stimulates the impulse to investigate, and the slight spice of danger that is involved in disobeying the behests of elders necessarily adds to the attraction in many cases. Taking it all in all, it is wonderful that more harm is not done.

If the school is to do its duty by the community, it will evidently have to teach its pupils to control this vital impulse without repressing it. This will be an extremely difficult task so long as the sexes are kept apart at school, for such a line of action can only encourage repression in some pupils and lead to underhand behaviour in others. Probably the only way to prevent either of these alternatives is to establish a system of co-education schools in which boys and girls can learn to meet each other naturally on an equal footing. It is, of course, essential that such schools should be staffed with men and women who are alive to the importance of their task and able to give the right kind of guidance at the right moment ; but if

these are secured, the vast majority of the pupils who attend such schools would undoubtedly develop into individuals who have learnt self-control without repression.

We said above that the average school at present leaves the education of the mating impulse to chance. It may be objected to this that definite attempts have been made to give boys and girls sex instruction at school, and that teachers have even been given the opportunity of acquiring such knowledge as will enable them to give this instruction effectively. Now there can be no doubt that all boys and girls should have instruction in this matter before they are expected to be responsible for their own actions, but no one who has really grasped what is meant by impulse will imagine that such instruction will by itself ensure self-control. Knowledge is needed to satisfy the impulse to investigate which is aroused by the mystery which surrounds the origin of children, and is further stimulated by the unwillingness of the average adult to give the young inquirer satisfactory answers to his questions. When the child finds that the ordinary channels of information are closed against him, self-assertion tends to be roused as well, with the result that he tries other means of solving his problem. In this way the child runs the risk of obtaining his information in such a form that it develops in him fixed

likes and dislikes which may work serious harm at a later stage. There can, therefore, be no doubt that suitable sex instruction has its place in the education of the individual.

Whether it is wise to give this instruction to large classes of adolescents as part of the ordinary curriculum is another matter. It must be borne in mind that home training teaches the average child to think of everything connected with sex as secret and mysterious : it is a thing "nice" people do not talk about in public. At the age of twelve or thirteen this idea has become part of the mental equipment of the boy or girl, and the teacher who is willing to discuss this tabooed subject in class is therefore likely to rouse resentment. Ideally, the instruction should undoubtedly be given by the parent, who should answer questions simply and truthfully as they arise. In this way every child would know all that is essential long before he reaches the difficult years of adolescence. Where the parents shirk their duty, the school has of necessity to step in. It might, however, be argued to some effect that it would be better for the school to follow the example of the parents in this instance, until it has learnt to provide something more adequate than wholesale class instruction.

We see, then, that suitable sex instruction is essential to satisfy the impulse to investigate and to ensure the right attitude towards the subject.

Beyond this, the function of the environment is largely that of stimulating the right ideals and of providing plenty of outlets for superfluous nervous energy. The full bearing of this will be seen more clearly after reading the chapter on Sentiments and Complexes.

(5) *The Impulse to Protect the Weak*

In its primitive form the parental impulse may only have prompted the mother to look after her own children. Under the influence of our gregarious habits and our growing imagination, the percepts that waken it have, however, increased in number, until to-day the fact that a person is weaker or younger than ourselves is as a rule quite sufficient to make us wish to help him, even though that person be a perfect stranger to us. The more dependent an individual is upon us, the more likely are we to feel for him an affection similar to that which the mother feels for her child. In order to emphasise this we shall therefore refer to the tendency as the impulse to protect the weak, or the "protective impulse."

It is difficult to say at what age this impulse begins to develop in children, because it is often impossible to judge how much of what we observe is due to imitation, how much to self-assertion, and how much to a true impulse to look after

some one younger or weaker. Occasionally, however, we come across cases which can hardly be explained in any other way. Thus a child of five will at times be wonderfully patient in playing with a baby who is just old enough to be a nuisance rather than a help in his games. Thus, too, children's play with their dolls or teddy bears is often too realistic to be due to mere imitation.

The healthy development of the protective impulse is evidently of as great importance to the community as that of the mating impulse, yet it receives almost as little attention after the first few years of school life.

In a good kindergarten children soon discover the pleasure of helping and looking after others, for the older children are encouraged to help the younger ones in various ways, and each class has pets and animals for whose welfare it is held responsible. This training has the further advantage of teaching the children that the protective impulse is not one which they can indulge capriciously, for the child or pet who has been entrusted to their care is liable to suffer in a way which they can appreciate, if it does not receive its fair share of attention. Thus they get the first inkling of the fact that we have to consider the needs of others at least as much as our own desires when we follow the promptings of this impulse.

It is obviously of great importance to the community that this attitude of mind should be encouraged in every possible way and it is therefore the business of the school to provide the child with suitable experience. This could be done quite easily in connection with children's desire to help each other in their lessons, if they were taught that it is right to help so long as they give real help, that is to say, help which makes the other child able to tackle his own difficulties with greater success on the next occasion. In a school which has succeeded in establishing the right attitude towards work, the older children would teach each other this lesson without aid from the teachers, for the would-be helper would find the wrong kind of help rejected with scorn, and would thus be forced either to abandon the task or to give help which is worth having.

Training of this kind, especially if supplemented by similar training at home, should produce an individual who is at least desirous of giving the right kind of aid when need arises, and who is able both to give it without any undue feeling of superiority and to receive it without loss of self-respect. The giving of help to those whom we consider our social inferiors raises further difficulties. It will, however, be more convenient to study these in connection with sympathy and pity in the chapter on emotion.

In conclusion, it may be worth while to warn the reader that the protective impulse is very dependent on the environment for the "inlets" and "outlets" it acquires, because acts that were originally prompted by it may easily be repeated to satisfy the love of self. Thus children who are continually helping others without receiving similar help themselves and children who give away their toys in the sure knowledge that they will be replaced in the immediate future are practically being taught to use helping and giving as outlets for self-assertiveness. If this attitude of mind becomes fixed, such children are likely to grow into individuals who are more interested in the publicity than in the value of their help. It is, of course, not to be expected that an act of help should be free from every tinge of self-assertion, since any such act necessarily gives us a feeling of power and thus reacts on our love of self. What is wanted is that the act should be due primarily to the desire to help and only secondarily and in a minor degree to the love of self.

(6) *The Impulse to Investigate*

Things which are strange or new arouse in us the desire to find out more about them, unless they are either of a nature to cause fear or so much outside the sphere of our interests—whether permanent or temporary—that they do not attract

our attention at all. Thus a sudden fall in the barometer is likely to stimulate the curiosity of the budding meteorologist, to whom it means a chance of putting his knowledge to the test, whereas it may rouse fear in the sailor, who thinks that it forbodes an exceptionally severe gale, and may leave a third person quite indifferent, either because he does not understand barometers, or because the recorded fall only suggests the possibility of a heavy shower at a time when the state of the weather is of no interest to him. The case with which we are concerned in this section is the first, namely, that in which there is just enough knowledge to rouse the desire for more, and no occasion to experience fear.

It is sometimes said that the young child is more curious than the adult, but this is hardly a correct statement of the case. The young child comes across so many things that are new to him that he is continually having experiences which puzzle him. He is, however, satisfied with very superficial answers to his queries : the child of two usually only wants the name of an object : this is a book, that a doll. A little later he begins to ask, what is this for ? why is that ? but very simple answers are still sufficient ; a child of four will for instance be quite satisfied, if he is told " because the sun has gone down," in answer to the question "why is it getting dark ?" This superficial curiosity

must of necessity decrease as the child's knowledge of his environment increases ; on the other hand, such questions as he asks tend to become more searching, for every explanation itself suggests a further problem : thus, the child who knows that the "sun goes down" at night will presently begin to wonder why it goes, or where it goes. How a child's desire for knowledge develops at this stage depends largely on his environment, for he is still absolutely dependent on others for answers to his problems. If he is made to feel that it is "naughty" to worry his elders with questions, or if he is given explanations which he himself knows to be inadequate or incorrect, he is likely to give up his attempts in despair, and turn his attention to something else. (Cf. account of "Anna" in Chapter V, p. 84.)

In the average environment the people on whom the child depends for his knowledge will answer some questions more readily than others, with the result that he gets to know more about certain classes of things and therefore presently becomes more interested in them, though the others still present numerous problems which he would gladly tackle, if he had the chance. At the age of ten or eleven many an intelligent child wonders whether he will ever get like those dull adults who seem to be quite satisfied to go through the world without understanding half

the interesting things which are going on around them. By the time he is eighteen he has, however, usually learnt the necessity of confining his investigations to a few problems, if he has not, indeed, given them up altogether as the result of lack of opportunity or lack of time. Adolescence is thus the period during which the impulse to investigate is normally driven into more or less fixed channels, with the result that the youth's superficial interest in all kinds of things decreases while his interest in a few special pursuits becomes greater and deeper. These pursuits need not, of course, be utilitarian in any sense of the word. When the impulse to investigate is at work by itself, we want to find out a thing merely in order to know more about it, and are not concerned with the material gain or loss which such knowledge may involve.

Under favourable circumstances the impulse will drive us to intellectual efforts throughout life. As things are at present, economic conditions unfortunately often cause it to deteriorate during later adolescence, for monotony of life tends to deprive the individual of the necessary stimulus and too long hours at mechanical work leave him no energy for strenuous mental effort in his leisure moments. Thus, many a bright, promising youth finds after some years of factory life that his neighbours' affairs and sensational stories give

him all the mental food he needs. Yet it is of the greatest social importance that the impulse should be encouraged in any one who has enough ability to turn it to good account, for we owe most of our inventions and discoveries to it. The desire to investigate is, moreover, the only force which makes us want to find out things that are of no immediate use to us by urging us to work at our problems for the sheer love of the work. Thanks to it, men will spend their lives in investigations which seem to lead nowhere so far as practical applications are concerned until the world is suddenly startled by a discovery of such obvious practical value as for instance that of X-ray photography.

On the whole, the impulse to investigate is probably of greater value to the group than to the individual; in primitive life it must indeed often have led the unwary investigator to his own destruction. His group would, however, receive benefit from his work whether he succeeded or failed, for his success would increase their knowledge or power, whereas his failure would, at least, prevent those who were present from making the same mistake. Under modern conditions the risk to the individual is not so great, but it is, of course, a common thing for the inventor of a really valuable mechanism to reap little or no material benefit from his work.

(7) *The Impulse to Collect*

Every one who has dealt with young children knows that they go through a stage when they seem to enjoy collecting for its own sake. It may be that we have here the stirring of an ancient impulse similar to that which makes the squirrel collect its store of nuts. It has, however, become a true impulse in human beings, for it depends entirely on his environment and on his more or less fixed interests what a particular individual happens to collect. At five years of age town children are usually satisfied with tramway tickets or cigarette cards, later most boys at any rate turn to stamps, later still rare flowers or fossils may have their turn. During adolescence the individual grows too self-conscious to remain satisfied with purposeless accumulations of odds and ends, and the things he collects (*e.g.* botany specimens) have, therefore, to be of some value to him, that is to say, they have to satisfy his self-assertion or his desire to know as well as his impulse to collect ; but in this modified form the impulse stays with us throughout life ; it makes some amass property, others books, others china, etc. As in the case of the child, *what* we collect depends on our interests and on our opportunities ; but there are very few individuals who are not at least trying to satisfy this impulse in some way or other.

(8) *The Impulse to Construct*

Another impulse which is of great importance to the educator is the impulse to construct or make. In its pure form this impulse simply urges us to be making, without any regard for the value of the object we produce. The joy lies in the making as such; once the deed is done it only continues to give us pleasure in so far as it satisfies some other desire.

We have reason to believe that the impulse to construct develops at a very early age. Thus the way in which some babies invent a language of their own, instead of adopting that of their environment, suggests that it may already be active at the age of twelve to eighteen months, though the child has as yet too little control over his environment to do much to satisfy it. Every one who has watched babies must have observed that the child sets to work on his environment as soon as he has the necessary control over his muscles. At first he is only investigating and experimenting. At this stage he feels, tastes and pulls to pieces everything that comes within his reach and thus gets his first knowledge of the things around him. By the age of two and a half he has, however, usually begun to make as well as destroy, though it is at times difficult to say whether it is the making or the experimenting which he is enjoying. A child will, for instance,

build up a heap of bricks again and again, only to throw them down with a bang. Then gradually, as his knowledge of his little world increases, he spends more and more time in constructing. At first bricks, clay, sand and coloured chalks are his best material, but as his control over his muscles increases he is ready to learn the use of a hammer, saw, needle, etc., and thus becomes able to handle less tractable material. At the age of six or seven he begins to construct in the realm of ideas as well, making up stories of his own or inventing imaginative games. Later, he may try inventing puzzles or setting himself problems for his own solution ; thus a child of eight who had exceptional facility for number work set himself to find out exactly how many hours he had lived. How a particular child develops must, of course, depend partly on his natural ability and partly on his environment, but no normal child is without the impulse to make, and it is therefore important to see that he learns to use it to his advantage.

Like the impulse to investigate, the impulse to construct tends to remain active in its pure form throughout life. Any one who doubts this should watch parents helping children to make sand castles or fly kites or build and sail toy boats. It is true that the parents begin in order to please the children, but they often get so interested in

their task that they are seriously annoyed, if the young helper does something which spoils their work, even though it obviously adds to his enjoyment to see whether he cannot do this bit by himself.

The strength and permanence of the impulse to construct and the impulse to investigate should be borne in mind by all educators. Anything which involves making always attracts children of all ages, and if it necessitates finding out how to make as a preliminary stage, it is even more popular, so long as the task is not too difficult and there are no artificial penalties attached to failure and waste of material. As in every other case, so here again, success feeds the love of self, but it is the fault of the environment if it does this unduly. Under favourable conditions the effects of such training are to help the pupil to find his level, to teach him to think for himself to the best of his ability, and hence to divert his love of making into channels in which he is likely to achieve something. In this way his training during childhood and adolescence may enable the individual to produce work of value to himself and to his community ; but even if it is not able to achieve this, it will at any rate add greatly to his power of enjoying life, by providing him with hobbies which make it possible for him to satisfy the ever-active impulse to construct.

CHAPTER IV

SENTIMENTS AND COMPLEXES

A. The Sentiment as a Centre of Potential Activity.

B. The Origin and Growth of Sentiments :—

(1) The part played by impulsive activity.

(2) The part played by the environment.
The influence of the parent.
The influence of the community.
The meaning and function of hero worship.

(3) The part played by the "self."

C. The Effect of Sentiments on Habit and Judgment.

D. Mind-Tunnelling by the Method of Free Associations:—

(1) Description of the method.

(2) Repressed complexes and their effect on behaviour.

(3) The value of mind-tunnelling in connection with repressed complexes.

E. Gregariousness as a Centre of Potential Activity:—

(1) The psychology of gregariousness.

(2) The relation of gregariousness to love of approval, suggestion and imitation.

A. *The Sentiment as a Centre of Potential Activity*

It has been shown in the preceding chapters that all voluntary action is primarily due to impulse. But impulse is always momentary. In so far as life is governed by it, each moment

is sufficient unto itself, and it is therefore impossible to regulate action with regard to future ends or to feel regret for past mistakes. Many animals never rise above this level; in human beings it is, however, merely a stage of development that is passed through during the first months of life. As is well known, the attention of a baby is easily attracted now to this, now to that; his desires are merely momentary, and a thing need only disappear in order to be forgotten. But even the child of two is not so easily satisfied in regard to things he really knows, such as his favourite doll or the dog who jumped at him, for he is beginning to develop fixed likes and dislikes, or "*sentiments*," as they are called technically. (For definition of sentiment, see p. 58.)

There is no limit to the persons, animals or things for whom we can form sentiments, since there is no limit to the objects of thought which we can learn to like or dislike. Popular usage has provided us with special names for certain types. Thus we call the occupations we like our interests or hobbies, and the standards of behaviour of which we approve our principles, or, if difficult to realise in practice, our ideals. In the case of persons, we can even distinguish between various grades of likes and dislikes, for we talk of friends, enemies and "mere acquaintances."

It will be evident that sentiments are of the greatest importance in the development of the individual. In so far as he has formed fixed likes and dislikes, he will necessarily have fixed desires, and in so far as he has fixed desires, he will act consistently, and will therefore attain far more than while entirely under the sway of impulse. An example may make this clear. The child of three or four who is left to his own devices with a mechanical toy usually tries to pull it to pieces in order to find out what makes it go, but once he has broken it he quickly loses all interest in it, for the separate parts mean nothing to him. The boy of nine or ten who is interested in mechanisms also likes to pull such a toy to pieces, but he will occupy himself with it for a much longer time, because he will have a certain amount of knowledge which he can bring to bear on the problems it presents. His interest in mechanisms also has other important consequences: it stimulates him to learn more about them, and thus leads him to examine them or to ask questions about points that puzzle him. If his desire to learn is really strong, it also teaches him the value of perseverance in the face of difficulty and may even enable him to overcome some contrary tendency such as dislike for reading or indifference to accuracy. Under favourable circumstances his interest in mechanics can therefore

make a boy act consistently towards one end and subordinate such impulses and sentiments as are inimical to that end.

Once a sentiment has been formed it may under suitable conditions rouse any of our impulses. Thus the love parents feel for their child will make them fear anything likely to hurt him and attack any one unjust to him. It may also make them collect (*i. e.* save) for his benefit, or investigate various problems connected with his welfare. Similarly a student's interest in botany may make him fear that he may not be able to find sufficient time for it or dislike persons who try to interfere with his studies. If the sentiment is strong enough, it may even set free enough self-assertion to enable him to overcome a strong dislike for some other subject which he needs for his chosen line of study. On the other hand, it is impossible for the student to *feel* indifferent about anything which concerns his progress in botany, just as it is impossible for the parent to *feel* indifferent about anything which he considers connected with the welfare of his child. Obviously both student and parent may think it wise to *seem* indifferent on a particular occasion, but that is then due to the activity of some other, contrary tendency.

Thus a sentiment for any object of thought (that is to say, the child and the botany in our last

two examples) ensures that we are interested in anything which affects that object and that we act consistently in regard to it, in so far as we are not checked by other contrary tendencies. A sentiment may therefore be defined as *a system of impulses organised round the idea of some object of thought, in such a way as to ensure consistency of behaviour in regard to that object, except in so far as this is prevented by the activity of other contrary tendencies.*[1]

Although it was convenient to describe sentiments as likes and dislikes in the first instance, this would not be satisfactory as a definition, for it suggests that they are mere attitudes of mind, whereas they are really *centres of potential activity* of which we become aware through our likes and dislikes. They are, in fact, somewhat like the batteries which are used for storing electrical power, the "object" of the sentiment being represented by the mechanism of the battery, the requisite percept or idea by an operator who is able to discharge the battery, the acts and thoughts which can be produced in this way by the motors and lamps to which the operator can distribute the stored power and the energy of which we are

[1] Mr. Shand, to whom psychology owes this use of the term "sentiment" defines it as a system of "emotional tendencies." As his use of the term "emotion" is, however, rather different from that adopted here, it seems better to modify his definition as above.

aware when a sentiment is being stimulated by the power which he is setting free.

B. *The Origin and Growth of Sentiments*

(1) *The Part Played by Impulsive Activity.*— While the environment provides as it were the raw material for sentiments, it would be a mistake to suppose that two children who are brought up in identical surroundings would necessarily acquire the same centres of potential activity, for there is undoubtedly something within the individual which decides how his impulses become organised round various objects of thought. Some are frightened when others are angered ; some enjoy constructive or inventive work to an extent which seems quite incredible to others. These individual differences are, of course, partly due to differences of environment ; but they must be partly innate, for they can be observed in quite young children. Moreover the same child differs from day to day. There are times when he is not happy unless he is making or creating, and these are followed by others when he seems to have lost all initiative. It is difficult to account for these phenomena unless we assume that impulses can in some way become surcharged with energy from the self-preservative and race-preservative centres and that this energy will then expend itself on any object, however unpromising, if it cannot find an

outlet through an established sentiment. This may be called true "impulsive activity." It is characteristic of children rather than of adults, for impulsive energy seems to discharge through established centres of potential activity whenever there are such at its disposal.[1]

When an overflow of energy has caused an impulse to expend itself on some new object, the result may be pleasant or unpleasant. In either case the object is henceforth a matter of interest to self, and thus a centre of potential activity. If the result was pleasant, that object is likely to be chosen purposefully, if unpleasant, it is likely to be avoided when next that impulse is in need of an outlet. What happens thereafter depends on circumstances. The little child who is expending his constructive impulse on clay-modelling and on pencil-drawing may discover that the clay model looks more like the real thing, or that it receives more praise from his elders. In either case he will learn to prefer the clay to the pencil: in an unwise environment he may even take a lasting dislike to pencil-work. All the same, clay

[1] What is loosely termed an "impulsive" act is often only due to the activity of a centre of which we are not aware. The reader will find later that centres of potential activity can affect our behaviour without our being aware of their existence (cf. Repressed Complexes, p. 83). The term impulsive activity should, however, be restricted to cases in which acts are performed for the first time under the pressure of an impulse which is surcharged with energy.

ceases to provide a satisfactory outlet for his constructive impulse when he is a little older, for he then wants to make toys that "work" and consequently prefers to use cardboard or wood. From the adult's point of view he has lost his interest in clay-modelling and has taken a fancy to cardboard-modelling or woodwork instead. What has really happened is that he has had to find a new outlet for his constructive impulse, because the clay is no longer able to satisfy his needs. In other words, an interest only lasts so long as it satisfies a need of the self, and since the needs of a child change as his powers develop, it is not strange to find that his interests are, as a rule, very unstable. The same applies to his other sentiments, and the reason is also the same. We have to remember that the child is still learning the meaning of experiences which the adult has "understood" for many a year. In this process he necessarily makes mistakes, and when he feels that he has made one, he thereby destroys or modifies one or other of his sentiments.

As we grow older, our sentiments tend to become more permanent, because we gradually succeed in classifying our common experiences to our own satisfaction. All the same, we continue to form sentiments as long as we are mentally active and some of these are always temporary, because they depend on temporary circumstances. Thus a

worker is often afraid of a new mechanism until he has learnt to control it, but once he is master of the situation, he is likely to grow more and more careless, until his very self-assurance causes him to expose himself to a serious accident. In such a case the organisation of impulses round the idea of the mechanism has gradually changed from one in which fear was the main factor to one in which self-assertion is predominant. In other cases the adult, like the child, may lose all interest in an occupation because it is no longer able to give him the stimulus he requires ; it may merely have grown too easy to be attractive.

(2) *The Part Played by the Environment.*—We have seen that sentiments may owe their existence to an experimental overflow of energy. At first many centres of potential activity must come into existence in this way, for the environment has at first no meaning for the child. It would be convenient to have a special term for these systems (which we probably share with many of the higher animals), but there is at present no recognised name for them. We shall here call them *primitive complexes*, for the word sentiment implies a degree of self-consciousness which the baby does not acquire for some time (and which most animals probably do not acquire at all). As the child becomes aware of himself as an individual, these "primitive complexes" become true sentiments in

so far as they satisfy the needs of the self. The range of his activities is, however, no longer limited by chance discoveries, for his behaviour is influenced increasingly by other forces, such as love of power or desire for approval, and these cause him to engage in occupations in which some of his impulses are only satisfied incidentally.

What centres of potential activity he acquires will, of course, still depend to some extent on the innate characteristics of his impulses, but the influence of the environment makes itself felt more and more strongly as the child begins to be able to put meaning into his experience. In order to see how energy is diverted from one object of thought to another and what is the part played by the self in the process, it will be necessary to trace some of our sentiments back to their origin. Theoretically this should not be a difficult task, but the reader will find that it is often impossible in practice. We seem always to have thought this right and that wrong, to have liked this person and disliked that other, or, again, we seem to have conceived a sudden fancy for some person, thing or idea, and that fancy seems to have come from nowhere, so far as we can tell.

If we leave these aside for the moment, we are left with a certain number of cases in which it seems possible to give a satisfactory explanation.

Introspection seems to show that the sentiments for which we can account owe their existence either to other previously established sentiments or to some severe emotional shock. Under the first heading come many of our interests, for these can usually be shown to have developed out of pursuits which we first took up under the influence of some one we admired. Under the second heading come such sentiments as the fear of bathing induced by a narrow escape from drowning in childhood, or lifelong admiration for another person originated by the skill with which he helped us at a critical moment. It should be noticed that the second type really depends as much as the first on previously established sentiments, for there would have been no emotional shock had there been no love of living in the one case, or desire to succeed in the other. We may therefore conclude that all sentiments which we can trace to their origin are derived from other previously established sentiments of one kind or another.

If we now examine the sentiments that seem to come from nowhere, we shall see that most of these are formed in the same way. To the young child the adult is a wonderful person who can do all kinds of marvellous things which he finds difficult or impossible to copy. During the earliest years of his life, the child is, moreover,

absolutely dependent on his parents. Compared with his weakness and ignorance, they must seem all-powerful and all-wise. Hence they are normally his first heroes. If they praise an act, that act is worth copying, or if it was impulsive, it is worth repeating; if they like a person, that person must be "nice," even though the child at first dislikes both act and person. Thus he adopts their point of view, or what he imagines to be their point of view, through sheer prestige suggestion. Our oldest sentiments are therefore to be traced back to those earliest years of life for which our memory is notoriously bad. This accounts for the impression that we have "always" had them.

As for the love of the child for his parents, that is at first largely, if not entirely, cupboard love.[1] As soon as he is able to distinguish his mother from other persons, everything she does for him must strengthen the impression that she is the giver of good things. Thus the idea of "mother" soon becomes closely connected with the idea of "giver of good things." In technical

[1] I was watching lately a class of mentally deficient children whose mental development was that of children aged four to six. The teacher asked them: "Why do you love your mother?" She wanted the answer, "Because mother loves me." She got, "Because mother makes puddings." "Because mother puts me to bed." "Because mother gives me pennies," etc., etc.

language these ideas become so closely *associated* one with the other that each tends before long to produce the other of its own accord. The child goes confidently to his parents, if he wants something and is willing to believe that even the medicine and the punishments which they mete out are really intended for his good. From a very early age there is mixed with this a desire for fondling and petting, which is the first indication of "love" in the ordinary sense of the word. It is, however, entirely egotistic at this stage, and therefore really only a particular form of "cupboard love."

Later the sentiment grows in complexity. Watching their parents as closely as they do, children soon discover that the attitude of father towards mother differs in some respects from that of mother towards father. As soon as they have reached this stage, the little boy tries to imitate his father, the little girl her mother, and this necessarily affects their sentiments for the parent of the opposite sex, *e.g.* the mother is now for the boy not only the giver of good things, but also some one he must look after and protect.

A further stage is reached when the child has realised the existence of a community outside his own family circle. Unless he is exceptionally unfortunate in his parents, he discovers that they are respected by other members of their group,

and that at least one or other of them is the leader of some section of it. Various forces within him are urging him to go and do likewise. He is therefore impressed by the fact that his parents have attained in the world of adults the very thing for which he is struggling among his school-fellows, and his sentiment towards his parents is thus once again increased in complexity.

For the present purpose the important thing to notice is that the child of five or six has under normal conditions learnt to love and admire his parents, and has for some time already been sufficiently conscious of himself as an individual to do his utmost to imitate them at all points. When he comes to school, he is for the first time exposed to the influence of public opinion, and it is therefore important to know how this will affect the development of the sentiments which he has acquired at home. Observation seems to show that he readily falls in with those things which are in accordance with, or at least not contrary to, his home training, and that he struggles against, but as a rule succumbs to, those things which do not fit in with it.

This is especially the case with the child who is first exposed to contrary influences at the age of eight or ten. At this stage the desire to form into gangs has become fairly strong, with the result that the child longs above all things to be like his

companions, and will often do things which he "knows" to be wrong rather than expose himself to their ridicule.

Here is a case in point. In a certain private school some girls of eight had an oral composition lesson. The composition was written on the blackboard and the children were told to write it out from memory for homework. After the lesson the leader of a small group suggested that they should climb in at the window in the afternoon and copy the story from the board, as the teacher had been stupid enough not to rub it off. One of her followers privately thought this "very silly," but she climbed in with the others rather than protest or exclude herself.

If part of the environment is unfavourable, the child may in this way gradually develop two standards of conduct—one for home and one for school. If either the father or the mother has a strong personality, he will, however, continue to think that the home standards are the "right" ones, even though experience may have taught him that the others are better policy. How far he will ultimately return to these home standards will depend on his later environment. In a community in which social functions absorb the activities of the majority, the student feels ashamed of his love of books, even though he goes on with his studies. In a community in

which all amusement is held to be wicked, the young girl feels equally ashamed of her longing for harmless pleasures. When home and community work together, the rebellious individual is almost certain to succumb to the pressure brought to bear upon him, unless indeed the person who roused his opposition is able and willing to stand by him. (His rebellion may, of course, be due to some book that happens to have come his way.) When home and community are at variance and about equally influential, the adolescent frequently adopts one standard for home and another for public life, for the community never ceases to be an important factor in the determination of behaviour, and it is only the exceptionally strong individual who dares to ignore public opinion.

We have so far discussed the development of sentiments as though they could be traced entirely to the child's admiration for his parents and to the pressure of the environment. To complete our description we must now turn to the psychology of friendship and hero-worship.

As is well known, hero-worship accounts for a number of sentiments during adolescence and friendships play their part in this respect throughout life. On examination friendship will, I think, be found to be merely a mild form of hero-worship. There is usually one who leads and one

who follows ; in the best forms of friendship each is the leader in some pursuits, the follower in others, and each therefore respects the other. If we bear this in mind, we may assume that whatever is true of hero-worship applies in a lesser degree to friendship. There is, therefore, no need to discuss them separately.

Hero-worship is, of course, particularly characteristic of adolescence, but it must not be supposed that every case one meets at school is necessarily genuine. The average youth feels that he is in some way at fault, if he cannot admire the master or mistress and the elder boy or girl who happen to be the fashion for the time being. He is therefore quite capable of persuading himself into a sort of sham hero-worship, rather than own to himself that he is lacking in this respect. Hero-worship that owes its origin to nothing deeper than this is not likely to have any lasting effect. But at other times the young adolescent does feel genuinely drawn towards some riper person. Occasionally his devotion may even become strong enough to absorb his whole being, so that the notice and approval of his hero alone make life worth living and his neglect causes suffering far more severe than the adult would as a rule think possible. In a few abnormal instances such neglect is actually said to have been responsible for suicide, but even in the

normal healthy case, in which the devotion is not extreme, it is none the less a force with which the educator has to reckon, for it sets free energy which is, so to speak, at the service of the elder. Properly directed, it may be used to help the young admirers to overcome their faults and to develop new interests, misused, it may be frittered away in such trivialities as carrying books or bringing flowers.

The question naturally arises, whence comes this hero-worship, which in its milder forms is a normal stage in the development of every individual? To give a complete answer to this question would take us beyond the limits of this book. We shall therefore quote results and take the proofs for granted. It has been shown by the researches of Freud, Jung and others that hero-worship is an intermediate stage through which the adolescent has to pass in the process of becoming an independent individual, capable of founding a family of his own. In childhood his parents fill his horizon, he takes them as his model for everything, he desires to please them above everything. If one of his parents has a personality much stronger than his own, his development may be arrested at this stage ; then we get the full-grown man who remains "tied to the apron-strings of his mother." Normally, the individual manages to free himself from too great

domination of his parents during the period of adolescence. His first attempt in this direction is usually to find what seems like a partial substitute for them, though it is not an "attempt" in the ordinary sense of the word, for he has no idea what is happening to him. He only realises that he feels strangely drawn towards this or that person.

In order to understand this phenomenon we have to get some insight into the possibilities of the unconscious part of our minds. That part of the mind is unconscious, every one has probably had occasion to notice in regard to memory and thought. The easiest way to recall, say, a name one has forgotten, is usually to wait until it comes back of its own accord ; that is to say, to leave it to the unconscious to find it. The quickest way to solve a difficult problem is often to put it aside for the time being and to come back to it later on. This is true even if we have not worked long enough to fatigue ourselves. All that is essential is that we should be thoroughly interested in our quest. Then the mind goes on working at it below the surface of consciousness while we are consciously attending to other things, and we therefore come to it better prepared on the second occasion. Sometimes we may even wake up in the middle of the night with the solution for a problem which has been worrying us all day.

What is not so generally known is that impulses can behave like memory and reason in this respect. Modern analytical psychology (*i.e.* the work of Freud, Jung and others) has taught us that there may even be serious conflicts going on below the surface without our knowing anything about them. This happens when we repress desires of which we are ashamed, instead of facing them squarely and fighting them in the open as it were. For impulses and sentiments cannot be killed ; the choice always lies between diverting their energy into different channels and hiding or "repressing" them.

Perhaps the most difficult conflict that the human mind has to face is one which every individual has to tackle, if he is to become an independent member of society. This conflict begins as soon as the child is deprived of the undivided attention of his mother or nurse and has consequently too much "power to love" at his disposal. Under normal circumstances most of the energy that is set free in this way is gradually absorbed in childish friendships and in various other sentiments. Between the ages of four and seven most children are absolutely absorbed in discovering their own powers and their relation to persons and things, and at this stage their little efforts to try their powers are usually welcomed by those in authority. As a

child grows older and stronger, Nature urges him more and more fiercely to go his own way and to learn from his own experience. On the other hand, his parents usually set very narrow limits on what they consider it safe for him to try, and his love and admiration for them make him feel that it is wrong to disobey them. The result is that he is often faced with a serious conflict of desires at the early age of nine or ten, and this conflict tends to grow more serious during the next few years, because the boy is then old enough to feel ashamed of it and consequently to repress such portions of it as come to the surface of consciousness. In the course of this process some of the energy or power to love which was originally centred round the parent, or in himself, seems to be set free and transferred to some one else. This substitute may or may not bear some resemblance to one of his parents; what is essential is that he should seem to have some quality or power which the youth is able to appreciate, or that he should by actual experience prove to the youth that he is able to show him new and desirable outlets for his powers. Thus boys make a hero of a master because he is a fine athlete, because they enjoy being taught by him, and so forth. In all such cases the master provides a safety-valve for the superfluous energy of his young admirers, and it

therefore depends on him whether they use it wisely.

(3) *The Part Played by the Self.*—In the course of this section we have seen : (1) that sentiments owe their existence to the pressure of some strong impulse or to that of one or more previously established centres of potential activity ; (2) that primitive complexes which are formed by impulsive activity only develop into permanent sentiments in so far as they affect the individual's conscious love of self ; and (3) that other sentiments can all be traced back step by step until we come to that same "love of self," or "self-regard," as it is usually called. Self-regard is, therefore, the primary sentiment from which all others derive their energy. It probably comes into being at a very early age, but it only affects behaviour spasmodically at first, for love of self obviously presupposes consciousness of self, and a child is usually two or three years of age before he is *fully* aware that he is a little individual with wants and powers of his own. During this period, he is entirely self-centred in so far as he is aware of his "self," for he is so busy finding out all about himself that he has little energy left for anything else, and he is still so dependent on others that it is only natural that he should be led to consider himself the centre of his little universe. Such sentiments as he forms are the outcome of this view of life ; he likes

those who give him what he wants, he dislikes those who do not, but beyond that he is not interested in others. As his power over his environment increases, his idea of himself changes, and he is therefore no longer satisfied with the things which pleased him at an earlier age. In other words, early likes and dislikes tend to change in value or disappear as one grows older. In so far as energy is set free in this process, it may either be transferred to other persons or things, or it may be re-absorbed by the self. Thus the child who has lost his interest in stamp-collecting may either find a new outlet for his energy in some other occupation, or he may merely spend so much more time in day-dreaming. What he does in a particular case, and whether the new occupation is or is not desirable, will depend partly on himself but to a much greater extent on his environment, for the approval of those whom he respects ministers to his self-regard and public opinion is a force he dare not ignore. Thus it is the community which is at fault, if the growing boy or girl fails to form sentiments of social value. If the environment fosters a social ideal of the "self," the youth will try to be unselfish ; if it fosters an ideal of self-seeking, he will as readily grow selfish.

C. *The Effect of Sentiments on the Formation of Habits and Judgments*

Once a sentiment has become established it tends to stimulate the growth of habits, for it necessarily finds expression in one or more fixed desires, and our efforts to satisfy these desires will often cause us to acquire new forms of activity. This point will be discussed more fully in the chapter on the Growth and Control of Habits (see Chapter VI).

Sentiments also affect our interpretation and judgment of the acts of others. If we like a person we tend to judge his behaviour too leniently, if we dislike him we tend to judge it too severely. Possibly we must have caught ourselves in the act to realise to what an extent we are capable of such an injustice, but occasionally we have the opportunity of observing something of which we normally disapprove first in a person whom we like and then, within a few hours or days, in another whom we dislike. In such a case we find ourselves (often to our own surprise) declaring it to be a charming weakness in the first case, a further proof of utter worthlessness in the second. And we are really but little better off when we are aware of this danger, for then our very desire to be just will probably make us judge those we like too severely and

those we dislike too leniently. It is therefore impossible to be quite fair in one's judgment of any person whom one either likes or dislikes. Moreover, since one cannot judge a person at all without knowing something about him, and cannot know anything about him without conceiving, however slight, a like or dislike for him, it follows that it is impossible to judge any one quite fairly.

Mr. Shand summarises the effect of sentiment on behaviour as follows: "Every sentiment tends to include in its system all the emotions, thoughts, volitional processes and qualities of character which are of advantage to it for the attainment of its ends, and to reject all such constituents as are either superfluous or antagonistic" (*Foundations of Character*, p. 106).

D. *Mind-Tunnelling by the Method of Free Associations*

(1) *Description of the Method.*—It will have been observed that the work of this chapter has been largely based on results obtained by students of modern analytical psychology. This is a branch of psychology that is likely to become increasingly important to teachers and students of education, for it often enables us to explain behaviour which would seem capricious or meaningless without its aid, and to recognise symptoms

in their early stages before the underlying causes have led to the formation of bad habits or of a wrong attitude towards life.

The methods which the "analyst" employs are based on what is technically known as the *Law of Association by Contiguity*. This is stated by Bain as follows :—

"Actions, Sensations and States of Feeling, occurring together or in close succession, tend to grow together or cohere in such a way that when any one of them is afterwards present in the mind, the others are apt to be brought up in 'idea.'" Let us suppose, for instance, that I learn to appreciate the perseverance of a certain person in connection with a definite piece of work. Then the chances are that my thoughts will drift to that person when I think of that piece of work, or when I think of the value of perseverance. Similarly the thought of that person is likely to lead me to dwell on the value of perseverance or on the piece of work in question. What happens on a particular occasion will, of course, depend on my interests at the moment.

Thus the Law of Association by Contiguity is merely the Law of Habit applied to the sphere of thought. If any idea "A" becomes associated with another "B," then there is henceforth a tendency for each to suggest the other. The

strength of this tendency will depend partly on the amount of interest attached to the association "AB," and partly on the number of times "A" and "B" have occurred together. The burnt child, if seriously burnt, dreads the fire after one experience, for the association between fire (A) and pain (B) is of enough interest to the child to be remembered for good. But the fact that $4 \times 5 = 20$ will usually need several repetitions before it is remembered, for there is, as a rule, but very moderate interest attached to the process of counting four rows of five beans.

Associations between ideas differ from habits of action in one important aspect. Actions only become connected in the order in which they are practised, but if the number of ideas have become connected together, then any one of them has the power of bringing back any of the others. In other words, associations of movements only work forwards, whereas associations of ideas work backwards and forwards. Thus even counting backwards is difficult without practice, but other things being equal, it is no more difficult to work back from bed-time than to work forward from tea-time, if one wants to recall what one was doing at seven o'clock on a certain day.

It is this fact that has been turned to account in analytical psychology. The whole of its complex technique is based on what is termed the

Method of Free Associations. Fundamentally this consists in letting the mind wander freely from subject to subject, without attempting to control the flow of thought in any way. If this is done, things long ago "forgotten" or momentarily repressed come to the surface of consciousness and enable us to explain acts that seemed purposeless or fancies that are quite contrary to the main trend of our character.

An example will make this point clearer. When I was trying to choose a suitable illustration in the last paragraph, I thought first of a "certain type of ability," then of "skill," but neither satisfied me, though it obviously did not matter much what word I used. Then "perseverance" came, and immediately I felt it to be the "right word." I stopped to wonder why. I had just before been writing up my notes on a certain feeble-minded girl, and had come across the entry: "Not lacking in perseverance, spent five minutes trying to thread a needle with cotton too coarse for it. I finally persuaded her to give it up." This came back to my mind now and seemed sufficient explanation for the moment, though there was no reason why that entry should have caught my eye rather than several others. It was not till I wrote the words "Method of Free Associations" that I understood that part of the problem. "Perseverance" immediately flashed

across my mind again, this time as being essential in the application of this method. That explained why I had noticed that particular entry. I was intending to write this section as soon as I had written up my notes. I have often of late had cause to realise that much perseverance is needed in order to succeed with this method, and though I was not consciously thinking of that aspect of it at the time, it had evidently been stirred to activity below the surface of consciousness. That is why that entry caught my eye, and that is why "perseverance" seemed the "right word" for my illustration. If the reader will try similar experiments, he will often find explanations for acts which are at first sight quite as purposeless as the one I have just described.

(2) *Repressed Complexes and their Effect on Behaviour.*—If we repress, *i. e.* refuse to think about, an experience we have had, it is either because it was exceptionally painful or because it has in some way hurt our self-respect. In little children the knowledge of conventions is so slight that the feeling of shame cannot as yet act as a restraint to any large extent, but fear of disapproval and self-assertion very effectively take its place. The child will not talk about things he has seen, heard or done, if he has reason to expect that such an account is likely to have unpleasant results. Neither will he ask questions about

anything he wants to know if he thinks he will not be told the truth. Since it is, moreover, almost impossible for little people to think about a thing without talking about it, the determination to keep silent about any experience of theirs is almost certain to lead to repression of the same.

As was pointed out earlier in this chapter, a vivid emotional experience is often the source of a lasting sentiment. If an experience of this kind is repressed, the sentiment is not thereby broken up, for the impulses remain centred round the idea. The desires to which they give rise are, however, prevented from coming to consciousness in their normal form, for they would only be repressed if they did. Yet, since the "*complex*" (as the sentiment is usually called when repressed) is still active, the vital energy set free by it must find an outlet somehow. At times it manages to slip out undisguised when we are not on the watch. Thus a lady who considers it her duty to keep on good terms with old family friends, but who, none the less, heartily dislikes one of them, once said to the latter in my hearing, "I am so glad you have to go so soon." She was evidently quite unaware of the slip she had made, for she did not correct herself or seem self-conscious in any way.

More often these repressed complexes find an

outlet in a disguised form. Thus Jung gives us an account of a child of four (called Anna in the text) who developed an abnormal interest in geography as the result of a repression. When her baby brother was born, Anna wanted to know about the origin of children. Her father told her that the stork brings them, but this she found out to be untrue. She therefore lost faith in her parents at the very moment when she was faced with a problem which was of intense interest to her and which they alone could solve for her. This happened just before the earthquake of Messina. Anna heard the latter discussed at table. She got very excited and asked endless questions about it. Her desire for knowledge was such that she spent hours poring over maps and pictures of volcanoes. She also "began to cry out frequently at night that the earthquake was coming and that she heard the thunder" (*Analytical Psychology*, Jung, translated by Constance Long, edition 1916, p. 141). Presently her father took an opportunity to tell her something about the origin of children in a way that convinced her that he was speaking the truth. Then her fear of earthquakes disappeared as suddenly as it had come into existence. Her very interest in them was lost! "In order to test this new state of affairs the father showed her pictures illustrating volcanoes and earthquake

devastations. Anna remained unaffected; she examined the pictures with indifference, remarking, 'These people are dead; I have already seen that quite often.' The pictures of a volcanic eruption no longer had any attraction for her. Thus all her scientific interest collapsed and vanished as suddenly as it came" (*op. cit.*, p. 144). Here we have, therefore, interest in the origin of children repressed, and the energy set free by it diverted to interest in earthquakes and volcanoes. But such "sublimation," as it is called technically, is abnormal at the age of four. As Jung points out, it would, if encouraged, involve premature mental strain, for which the child would very likely have to suffer later on.

The paths by which a repressed complex finds an outlet are many and various. Thumb-sucking, if continued after infancy, is often due to a repressed desire for more affection. Queer fancies and objectless fears can usually be traced to some experience long ago forgotten by the victim. And always the method of discovering the cause of a symptom is fundamentally that of free associations, working at times from a person's waking thoughts, and more frequently from his dreams.

As in the case of sentiments, these methods of relieving pressure are repeated if not checked; but since the resulting habits originate in desires which the individual is hiding from himself, it is

often difficult to discover their source, and the person himself is usually under the impression that he has drifted into them involuntarily.

(3) *The Value of Mind-Tunnelling in Connection with Repressed Complexes.*—In conclusion, I will quote a case of Dr. Rivers (See *The Lancet*, August 18, 1917). A certain officer in the R.A.M.C. had a great dislike for closed spaces. He had suffered from this since boyhood. To be shut up in a closed space frightened him, though he could give no reason for his fear, and he found the strain of living in dugouts and trenches so intolerable that he broke down under it. Working with the method of free associations, Dr. Rivers caused him to recall the following scene from his childhood. As a little boy of three or four, he had taken something to a ragman in order to sell it. The ragman lived at the end of a long dark passage. When the child came back, he could not open the door at the end of the passage, at the same time a dog began to growl in the darkness ; it is no wonder that he was terrified. This adventure he had first repressed and afterwards forgotten. But it had gone on living below the surface, causing a general fear of closed spaces, which he found impossible to conquer, though he must have realised its futility. An interesting point in cases of this kind is that the symptom, *e. g.* the objectless fear, disappears when the unconscious complex

has been brought back to consciousness and has thus been broken up.

The greater the resistance, the greater is the perseverance that is needed to recall an event that has been "forgotten" through repression. Yet recalled it must be, if we wish to cure individuals of such things as objectless fears, or if we wish to solve such problems as the functions of hero-worship in the development of the adolescent. Roughly speaking, the method employed in cases of difficulty is to attack the "forgotten" event from as many different points as possible, until it is at last stimulated so strongly that it is recalled in spite of the resistance.

E. *Gregariousness*

(1) *The Psychology of Gregariousness.*—In the course of this chapter we have had occasion to refer to the desire for companionship and the force of public opinion. Phenomena of this nature are usually classed together as products of our natural "gregariousness," or desire to live with others of our own kind. We have now to try to account for this desire and to study some of its effects on behaviour.

Gregariousness in its simplest form merely drives us to seek company of some kind. It causes us to take pleasure in being one of a crowd and makes us afraid of being out of reach

of other human beings. It is often described as a special instinct (cf. Trotter, *Instincts of the Herd in Peace and War*, and McDougall, *op. cit.*, p. 84), but it may well be the outward expression of the fear of being alone.

This fear every child acquires during the first years of life, for he is then so helpless that it is not safe to let him stray far afield. It probably manages to survive when he begins to be able to look after himself, because it ensures the attention of others, which is exactly what his egotistic little soul desires above all else. If he is taught to feel ashamed of it as he grows older, he will probably repress it into a complex, otherwise it may remain a sentiment all his life. In the latter case he will remain aware of his fear of solitude and will, therefore, not have to invent other more dignified reasons for his desire for companionship. Whether present as complex or sentiment, his fear will, however, have the effect of making him seek the society of others. As we have already seen, it is, moreover, soon reinforced by the desire for friendships (cf. p. 73).

These forces together must gradually accustom the child to the continual companionship of others of his own kind, and the companionship in turn must cause him to form interests and other sentiments, the satisfaction of which depends on continual intercourse with others. It is, therefore,

not difficult to see why the adult usually finds it extraordinarily difficult to live a life of solitude. To accustom himself to such a change he has to find new outlets for a large number of sentiments and complexes, some of which (such as the fear of being alone) date back to the earliest years of his life and have therefore had time to form all kinds of derivatives in their service.

At the age of seven or eight an interesting stage is reached in the development of gregariousness, for that is the age at which children usually begin to form gangs and clubs of their own accord. At first these organisations are, of course, very unstable ; not only the leader, but even the members, often change from day to day. Children of this age will often tell us : " I am not friends with So-and-so to-day." All the same the gang or club is a living entity to its members and it is felt to be a serious matter to be expelled from it. The verdict : " We do not want you to play with us, you always spoil the game," has made many a strong-willed child make his first real effort to gain self-control. It should be noticed that the fear of being alone inculcates the same lesson, even if the issue is not complicated by the desire for friendship, for a community always has it in its power to ostracise its most obnoxious members. Further, the need for company may come into conflict with the desire for the friendship of a

particular individual, for a person may find that one of his friends has incurred the anger of the community and he may then have to choose between comparative isolation and the loss of a friend.

(2) *The Relation of Gregariousness to Love of Approval, Suggestion and Imitation.*—It will be obvious that conflicts between the need for friends, the fear of loneliness, and the love of power, must lead to endless problems of behaviour. The more important of these the reader will find discussed in the chapters on Character. Before leaving the subject, it will, however, be convenient to prepare the ground by describing three phenomena which are closely connected with their solution. These are love of approval, suggestion and imitation.

Love of Approval.—Love of approval may be due to nothing more than a desire for concrete gain of some kind. Thus a child will try to gain the approval of the teacher, who has it in his power to grant or withhold some privilege. This is, however, only a partial explanation of the phenomenon, for we often experience a desire for approval when there cannot be any question of gaining something concrete. Another obvious explanation is that the desire is due to self-assertion, but that again is not satisfactory as it stands, for it does not show why we need the approval of others even when we know that we have done

a good piece of work. The love of approval, which is not merely the reverse of fear of pain, seems rather to be the result of the interaction of self-assertion with some other innate tendency. In the case of the young child this tendency is, no doubt, what we usually call his "love" for parent or nurse. It has often been observed that a child, who is deprived of the petting and fondling which the average child gets as a matter of course, misses something which the best education is not able to replace. Displeasure on the part of the parents necessarily means deprivation of these expressions of love and the child's need for them must, therefore, act as a strong incentive in the right direction. Presently this is reinforced by self-assertion, for he wants to prove to himself that he is growing in strength and skill, and he has become sufficiently aware of his own ignorance to feel that he can only judge his progress by the impression which his achievements make on others. By the time the child is old enough to form friendships, the desire for actual fondling and petting has developed into a desire for sympathy and comradeship, but the *origin* of his desire for the good opinion of his friend seems to be similar to that of the earlier forms. On the other hand, attempts to gain the approval of a superior whom the individual does not like, or of the community as a whole, seem rather to be based on fear and

self-assertion. The hold which a community has over the average individual (or, in other words, the extent to which the individual fears ostracism), is seen by the readiness with which he usually bows to the verdict of the majority. In fact, fear of public opinion is, as a rule, stronger than fear of a superior, if there is conflict between the two ; the average boy of ten or eleven will incur the wrath of his master rather than that of his fellows.

To sum up, the inborn tendencies of every normal person make him want to win the approval of the individuals who are either his friends or his superiors and of the groups and associations of which he forms a part. In any particular case this desire may be due to love for a particular individual, fear of one kind or another, or, more usually, the interaction of either or both of these with self-assertion. Finally, when the choice lies between the approval of an individual and that of a group, the latter is likely to prove the greater incentive, unless the former is reinforced by a strong feeling of friendship.[1] As the reader will gather from my analysis of love of approval, I feel inclined to think that the interaction of gregariousness and self-assertion is sufficient to

[1] Dr. McDougall assumes the existence of an impulse of self-subjection which "expresses itself in a slinking, crestfallen behaviour, a general diminution of muscular tone, slow, restricted movements, a hanging down of the head and sidelong glances" (*Introduction to Social Psychology*, Edition 1910, pp. 64-65).

account for this form of behaviour, and that it is consequently unnecessary to postulate the existence of a special impulse.

Suggestion.—Roughly speaking, we divide the people with whom we come into contact into superiors, equals and inferiors. This does not imply that we necessarily consider a person our inferior or our superior in all respects ; frequently we feel him to be our inferior in some things, our equal or superior in others. In so far as we consider another our inferior, he has no influence over us, for we consider ourselves better qualified than he.[1] But if we have reason to believe that he is our superior in something in which we would like to perfect ourselves, he is for us the leader of a group to which we would like to belong, and if our respect for him is great enough, we are prepared to follow him blindly and do not even experience the desire to find a reason for his commands. In other words, we are prepared to accept his statements *without logically adequate proof.*

It is usual to refer to statements accepted in this way as "*suggestions*," and to describe the persons who are willing to act on them as "*suggestible*."

[1] It should be noticed that the *unsupported* opinion of an equal, or even of an inferior, may be accepted uncritically when it flatters our self-esteem. This is due to our tendency to "forget" whatever is contrary to the dominating interest of the moment. (Cf. quotation from Mr. Shand, p. 78.)

We may, therefore, say that we take suggestions from our superiors, but not from our inferiors. There remains our attitude towards equals. This is different from either of the others, for it depends on the number of persons who make the assertion. If an equal has no one to support him, we expect him to give us a reason for his opinion, but if four or five all assert the same thing, we begin to waver and if the group is large enough, we usually accept its point of view as uncritically as that of the leader, for we then feel that we are dealing with an opinion of our group, and this we want to accept to prove ourselves members of the group. We may, therefore, conclude that we accept suggestions from a single individual if we look upon him as the leader of a group to which we either belong or would like to belong, and that we accept suggestions from a number of individuals, if we think that they are members of such a group. It is usual to call the former "*prestige suggestion*," the latter "*mass suggestion*." There are evidently a number of educational problems to discuss in connection with "suggestion," but it will be convenient to leave these until we are dealing with the training of the character (see Chapter IX).

Imitation.—If we wish to decide whether a certain person belongs to our "set," we try to find out how he behaves, what opinions he holds

and possibly how he earns his living. Then, if he turns out to be like us in what we consider essentials, we are prepared to accept him as "one of us." If not, we may consider him as our superior or as our inferior, but we do not admit him to our "group" on terms of equality. Hence the person who for any reason wishes to belong to a particular group is forced to imitate the characteristic actions of that group and even to adopt its opinions and prejudices. Imitation of this kind can be called "conscious" imitation. It is evidently the result of the interaction of gregariousness and self-assertion, for gregariousness impels us to join a group of some kind and the sacrifice of independence which this necessarily entails would injure our self-esteem, if we did not imagine that the members of the group we select are as good as, or better than, ourselves. Conscious imitation is, however, not necessarily intelligent. A boy of four "wrote" something that looked at a distance like a letter, but when asked what he had been writing about he looked blank; he had wanted to do what the older children were doing, but he had not yet realised the purpose of letters. It is worth while to notice in this connection that the child imitates wholes rather than parts. The reason for this is simple: the wholes have meaning for him, the parts have none, hence he is interested in the wholes and not in the parts, and

there can be no desire to imitate where there is no interest. We should therefore teach in wholes or, if the final whole is too complex, break it up into simpler wholes, each of which has a meaning for the child. Thus it is permissible to break up a word into sounds when a child has discovered their existence, but it is never permissible to break up a letter into "pot-hooks," because these are necessarily meaningless.

Besides "conscious" imitation, there is another form, which is known as "unconscious" imitation. As the name suggests, this is a tendency to imitate others which is not due to any conscious desire on our part. It also differs from the other form in that it may make us imitate the actions of people who do not belong to any of the groups which we have chosen consciously. At times it may even be responsible for mannerisms and expressions which we consider ugly or incorrect. On the other hand, unconscious imitation does not, as a rule, impel us to copy the movements of animals and mechanisms.

The reader will be prepared to find that unconscious imitation is due to the activity of unconscious complexes. Probably the fear of being alone is involved in every such act. The particular path by which the energy escapes must, however, be influenced by other sentiments or complexes.

It will be more convenient to discuss this point fully in connection with the origin of habits which have been acquired unconsciously (see pp. 117–119). The social value of unconscious imitation is too obvious to be in need of elaboration. It helps us to "rub off corners," and thus makes it easier for us to live with each other. It enables the child to pick up the speech and manners of his environment without conscious effort on his part.

There is, however, another side to the question, for the very ease with which we become like each other may in itself become an obstacle to progress, if not held in check by a contrary tendency. During childhood and youth self-regard usually provides this necessary check, but as persons grow older they often prefer to stay in the group in which they happen to find themselves, and it evidently depends on the constitution and leadership of that group whether this is or is not desirable. However, so long as an individual is growing mentally, he remains eager to choose his companions from the "best" group available and to acquire by conscious imitation much that he would never have obtained without such efforts.

CHAPTER V

NOTES ON THE FUNCTION OF THE NERVOUS SYSTEM

A. The Neurone or Nerve-Cell.
B. The Physiology of a Simple Reflex Act.
C. The Central Nervous System.
D. The Physiology of Impulse.
E. Summary.

We shall find as we proceed that the student of psychology must know a little physiology in order to appreciate some of the problems with which he is confronted. This chapter will therefore consist of a few notes on the physiology of the nervous system, which the reader will find convenient for reference.

A. *The Neurone or Nerve-Cell*

The nervous system may be described shortly as an exceedingly complex network of nerve-cells and their branches, or *neurones* as they are usually called. The cell of the neurone is microscopic in size; some idea of its minuteness will be obtained from the fact that there are said to be about 3,000,000,000 nerve-cells in the brain and

spinal cord. Fig. 1 gives the structure of the branches of a typical neurone. It will be noticed that most of the processes of the nerve-cell break off almost immediately into smaller branches ending in arborescences of fine twigs ; these are called *dendrons*. The one long process which is shown in the diagram is called the *axis cylinder* or *axon ;* it varies greatly in length in different neurones, but always ends in an arborisation similar to that of the dendrons. The axon has a few fine side branches near the cell of the neurone, which are called collaterals. Microscopic examination shows that the dendrons and collaterals of neighbouring neurones intermingle and interlace, but it is not known at present whether each neurone is an anatomically independent unit, or whether there is a continuous path from cell to cell. The important facts for the psychologist are that there is functional continuity between neurones and that each is so closely associated with several others that no part of the nervous system can be considered apart from the rest (cf. Lickley, *The Nervous System*, p. 12).

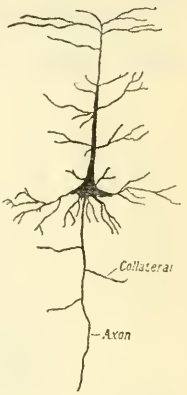

FIG. 1.—Pyramidal cell from cerebrum. (From Halliburton's *Handbook of Physiology.*)

B. *The Physiology of a Simple Reflex Act*

Fig. 2 is a diagram of the path of nervous energy in a reflex act—such as the withdrawal of the hand after touching something that is unpleasantly hot. "S" is a sensory neurone, the axon of which passes from the cell in the spinal cord to some point on the surface of the hand. "M"

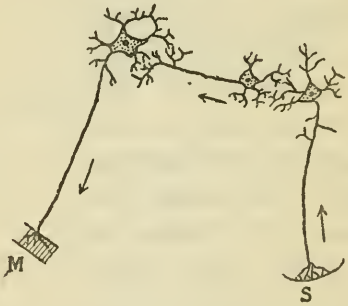

FIG. 2.—Reflex Action. (From Halliburton.)

is the motor neurone, the axon of which passes from its cell in the spinal cord to one of the muscle fibres which control the movement of the hand, and "I" is what may be called an intermediary neurone. When the excessive heat stimulates the sensory neurone S, nervous energy is set free. This travels up the sensory neurone to the intermediate neurone I, thence to the motor neurone M and thus down to the muscle fibre, which it causes to contract. In the diagram only

one neurone of each kind has been shown, but in practice many more are involved, for any movement of the hand depends on contractions in a large number of muscle fibres and a stimulus like heat usually affects more than one sensory neurone. Further, we do not normally burn ourselves without being aware of it, and we do not become aware of stimuli unless some of the nervous energy which they set free succeeds in reaching certain neurones in the brain. Thus Fig. 2 only represents the path of part of the energy that was set free; the rest must have passed by way of other intermediary neurones to those which make it possible for us to become conscious of heat and pain. This part of the path has been omitted in the diagram for the sake of simplicity, but it can easily be imagined from Fig. 3, which shows how we move an arm voluntarily. In this case the nervous energy is set free centrally in response to a thought or wish; it then travels to the intermediary neurones,

FIG. 3.—Diagram of the neurones of the motor path. (From Halliburton.)

and from these to the necessary motor neurones. Generally speaking, nervous energy can pass from one part of the nervous system to another by means of these intermediary neurones, and the number that is involved in a particular case depends on the complexity of the mental process involved.

C. *The Central Nervous System*

We shall next consider the structures of the nervous system as a whole. It consists structurally of two parts, the central system, which controls both voluntary and involuntary acts, and the much smaller automatic system, which is only concerned with pure reflexes, such as the activity of the glands and the contraction of the pupil of the eye in bright sunlight. The cells of the central system are situated in the brain and the spinal cord, those of the autonomic system are arranged in groups which lie along both sides of the vertebral column and near certain nerves of the brain ; the two systems are connected by strands of fibres which pass at intervals between them.

In both systems the cells which carry out a common purpose are grouped together into "nerve centres."

The central nervous system consists structurally of six parts : (1) the spinal cord ; (2) the bulb or medulla oblongata ; (3) the cerebellum or the

smaller brain ; (4) the pons or bridge which connects the smaller brain with the rest of the nervous system ; (5) the mid brain ; and (6) the cerebrum or greater brain (see Fig. 4).

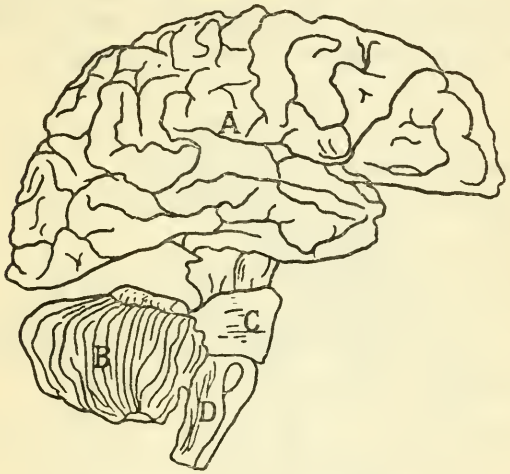

FIG. 4.—Plan in outline of brain as seen from the right side. A, cerebrum; B, cerebellum ; C, pons; D, medulla oblongata. After Quain's *Anatomy* (Sir E. Sharpey Schafer). Longmans, Green & Co.

It would take us far beyond the scope of this book to describe the functions of these different parts in any detail, but we may summarise them as follows :—

(1) The cells of the spinal cord control the reflex movements of the limbs and the trunk.

(2) Those of the bulb, the pons and the mid-brain regulate breathing, heart-beating and other reflexes which are essential for our well-being.

(3) Those of the cerebellum are concerned with the co-ordination of muscular movements, and more particularly with the harmonious adjustment of the working of the muscles which maintain the body in a position of equilibrium.

(4) Those of the cerebrum make volition, perception, thought and feeling possible.

1 = area for leg. 2 = area for body. 3 = area for arm.
4 = area for neck. 5 = area for tongue. 6 = area for mouth.

FIG. 5.—Left cerebral hemisphere: outer surface.

In other words, the cerebrum is the organ which enables us to formulate ends and to achieve them, whereas the rest of the nervous system is concerned with reflex activity, that is to say, with activity over which we have little or no direct control (see Chapter II).

There will be no need for us to study the structure of the spinal cord and lower brain any further, but it will be convenient to know a little more about the cerebrum.

Fig. 5 gives a rough idea of how the nerve-centres are distributed on its outer surface. The centres of the motor area enable us to move our muscles at will (cf. Fig. 3); the words "arm," "leg," etc., show the situation of the centres for the different parts of the body. The other areas that are marked in the diagram enable us to become aware of stimuli of sound, light, etc. The area marked "Tactile and Muscular Senses" is, perhaps, in need of a word of explanation; it is concerned both with ordinary stimuli of touch and with those which enable us to tell the position of a limb without looking at it; if the centres of this area are not in working order the patient becomes unable to tell the position of his limbs without looking at them. There remain the areas which are left blank in the diagram. These are usually called the "association areas," because they are said to contain the neurones which act as intermediaries between the centres of the sensory and motor areas, and thus enable us to associate together impressions from different senses and sensations with movements. Thus the light and sound of a fire set free energy in the visual and auditory areas of the cerebrum in the way explained above, but this energy then passes to some common centre in the association area, and it is the fact that this third centre is being stimulated simultaneously by two different sense centres, which somehow enables

us to realise that the light and sound are coming from the same source, the fire. Similarly, if a number of association centres are stimulated one after the other, further intermediary neurones seem to enable us to realise in what order we are experiencing the corresponding impressions.

The possibilities of mental activity which we owe to the association areas are further increased by the tendency of the neurones of the cerebrum to store impressions for future use. The physiological explanation suggested for this phenomenon is that nervous energy encounters resistance the first time it passes from one neurone to another, and that this resistance decreases every time the same path is taken. Psychologically this means that acts and lines of thought become easier on repetition. We are, moreover, able to reproduce many experiences at will, and can thus repeat them until the resistance has become negligible. In other words, habit, recognition and memory all depend ultimately on this tendency of nerve-centres to be permanently affected by suitable stimuli. It could be shown that perception, imagination and reasoning in turn depend on the power of forming associations combined with that of recalling the past, and we have already seen that voluntary movement can be initiated in the motor areas. Hence the cerebrum enables us: (1) to conceive ends; (2) to adapt our behaviour to these ends; and (3) to make useful forms

of behaviour habitual. Or, to put the same thing more shortly, the cerebrum is the organ which enables us to use our impulses to the best advantage.

So far, we are on safe ground, but if we now ask what is the exact connection between physiological changes in the nervous system and the mental processes which are in some way dependent on them, science has as yet no answer to give us. We know that the functioning of the mind is in some way dependent on that of the brain, but we are at present absolutely ignorant of the way in which this interdependence is established.

D. *The Physiology of Impulse*

As regards the physiology of impulse as such, there is as yet even less information at our disposal. It seems probable that a group of neurones at the base of the cerebrum (called the thalamus) is responsible for the distribution of impulsive activity, and that the thalamic centre itself is especially concerned with the production of emotion, while the cortex exercises discuminative and inhibitory functions. That is all Physiology can teach us at present about the initiation of impulsive activity.

In the case of most impulses we know just a little about the mechanism which controls the

rest of the process. Such information as we have is, in the main, concerned with the impulse to avoid danger and the impulse to fight. Observation teaches us that both these impulses produce certain reflex changes within us which prepare us for activity ; thus the person who is growing angry often stiffens his muscles and clenches his fists without being aware of it, and the person who is frightened starts up, even if he does not run away. Hence some of the energy which is set free by the percept must be diverted reflexly to the motor centres of the spinal cord, which will be thrown into activity if we give way to the corresponding impulse.

It has been shown of late that the reflex centres of the nervous system also prepare us for emergencies in another way. Situated just above the kidneys there are two small glands which secrete a substance called adrenaline. In anger and fear these glands are stimulated automatically, with the result that they secrete more than the normal amount of adrenaline. The way this reacts on the body is too complex to be described in this connection. The reader who knows no physiology will therefore have to take it for granted that the extra adrenaline increases the power of resistance of heart and muscle and thus renders both attack and defence more effective. Thus the impulse to fight and the impulse to avoid danger are connected innately

with reflexes which are of the greatest value to us when our safety is being threatened. In other cases we cannot be so certain, but impulsive activity is usually accompanied by facial expression which is undoubtedly reflex in nature. Thus there is reason to believe that each impulse is connected innately with a more or less complex system of reflexes to which energy is diverted automatically whenever the impulse is stimulated.

E. *Summary*

In conclusion we may sum up the main points in this chapter as follows. From the point of view of the student of behaviour, the function of the nervous system is twofold: the centres of the spine and lower brain control a large number of activities which are essential to our well-being and they do this reflexly, so that each stimulus produces the right reaction without any conscious interference on our part; the centres of the cerebrum enable us to become aware of our environment and to act in accordance with our desires. Our knowledge of the physiology of impulse is still very limited, but we have reason to believe that the energy set free by any percept is used partly in voluntary and partly in reflex activity, and that the amount of energy which can be expended in these ways on any particular occasion is under the control of certain nerve-centres in the thalamus.

CHAPTER VI

THE GROWTH AND CONTROL OF HABITS

A. The Law of Habit and its Effect on Behaviour.
B. The Origin of Habits.
   (1) Consciously Acquired Habits.
   (2) Unconsciously Acquired Habits.
C. The Growth and Control of Consciously Acquired Habits.
   (1) Rules for Acquiring Habits with the Minimum of Effort.
   (2) The Effect of Indecision on the Growth of Habits.
   (3) The So-called "Transference" of Habits.

A. *The Law of Habit*

We saw in the last chapter that our conscious acts, thoughts and feelings are the psychological equivalents of the physiological phenomena which are produced by the flow of nervous energy through the cerebrum. We also saw that nervous energy encounters resistance the first time it flows along a new path, but that each repetition decreases this resistance so that practice can make any path habitual, by rendering it easier than any of its alternatives. We may therefore state the *Law of Habit* as follows: *Every response to a stimulus—whether act or thought—tends to recur when the stimulus recurs, and every such recurrence*

itself strengthens this tendency. Clearly this does not mean that the recurrence of a stimulus is in itself sufficient to make the resulting act habitual. At times our behaviour produces unpleasant results, at others it is "abnormal" in the sense that it is due to the temporary weakening of some well-established sentiment or habit. In such cases contrary forces are likely to prove too strong on the next occasion and the response of the moment will, therefore, not have a chance of becoming habitual, no matter how often the stimulus recurs.

Our tendency to form habits enables us to make numbers of useful responses automatic. Thus we gradually learn to look round, if we hear the hoot of a motor, to turn out the electric light, when we go out of a room, and so forth. And these actions tend to become so automatic that we sometimes look up at the hoot of a motor when we are safely on the foot-path, or turn out the electric light when there are other persons left in the room. Moreover, as we all know, many of our most valuable habits consist of long series of responses which practice has bound together into one automatic whole. Thus we are able to write familiar words, to walk up and down stairs, and even to find our way to our place of daily work, without attending to what we are doing. In fact the mechanisms seem to work themselves once we have started them and we are often barely aware

of what is going on, unless the normal path is blocked by some unusual obstacle. The reader may obtain some idea of the way in which these series grow up by practising a short sentence, such as "I am going out," until he can write it as one mechanical whole. He will find that he is at first aware of every word as he finishes it, but that the words gradually merge into each other, so that he can ultimately write the whole sentence as though it were one single word. This means that there was at the beginning of the experiment more or less resistance between the sensations accompanying the finishing of one word and the first movement required for the next, and that this resistance was decreased by practice until it grew too slight to produce awareness. We can therefore represent the series which is rendered mechanical when habits of this kind are being formed as :—

Stimulus→1st movement→resulting sensations →2nd movement→resulting sensations→ . . . → . . . to the end of the series.

It should be noticed that the intermediate sensations only develop into percepts so long as there is a certain amount of resistance in the path which the nervous energy has to take. Afterwards we are only aware of the initial stimulus and of the final sensations, which mean that the task is completed, and are therefore free to attend

to other things once we have set the machine in motion. The reader need only consider the number of mechanical tasks he has to accomplish day by day, in order to realise how little time he would have left for tackling new problems, if he were not endowed with the power of executing automatic movements without becoming aware of them.[1]

There is still another way in which the tendency to form habits simplifies life. If my alarm clock wakes me at six o'clock on a cold winter morning, I am quite likely to decide that it is really too cold to get up so early and that the piece of work which seemed so urgent last night can well be left for another day. But if I have decided to form a habit of getting up at 6 a.m. and therefore force myself to obey the alarm day after day in spite of various good reasons to the contrary, I find that these reasons gradually cease to obtrude themselves on my consciousness and that I presently jump out of bed at the proper time without being

[1] The physiological cause of this loss of awareness is not certain. It has been suggested that the resistance which the nervous energy encounters is the physiological equivalent of consciousness and that every decrease in resistance is accompanied by a corresponding loss of awareness. There is, however, reason to believe that the motor centres which give us control over voluntary movements cease to function when an act has become habitual and it is therefore possible that the loss of awareness is due to some change in the path taken by the nervous energy when the act has become automatic.

aware of any choice in the matter. This is an instance of what it will be convenient to call a "habit of choice." Like all habits, it is formed by decreasing the resistance between a stimulus and a reaction and it only differs from a habit of action in that the reaction happens to be an idea instead of a movement or a series of movements. Our tendency to lose sight of possible alternatives as one course of action becomes habitual clearly results in much economy of effort, for it reduces both the number of problems we have to solve and the number of times we have to exert will-power in order to act according to our resolutions.

To sum up, thanks to the Law of Habit, we drift into many useful forms of activity and are also able to acquire acts of skill and to learn to behave consistently without special conscious effort. Moreover, the separate elements of an act of skill and the disturbing alternatives in an act of choice cease to attract our attention as these acts become automatic. In short, habit makes easy what was at first difficult and thus enables us to adapt our actions to our needs with the least possible expenditure of energy.

B. *The Origin of Habits*

So far as we know, the only mental systems which make for consistency in *acquired* forms of behaviour are those centres of potential activity

which we call "sentiments" when they are conscious, and "complexes" when they are unconscious. It is therefore to these that we must turn for the origin of habits.

(1) *Consciously Acquired Habits.*—Clearly every consciously acquired habit must have been formed in response to some conscious desire, and we know that conscious desires owe their existence to sentiments. We may therefore conclude that *consciously acquired habits are formed in the service of sentiments.*

(2) *Unconsciously Acquired Habits.* — Though most of the habits which are formed in the service of sentiments are acquired consciously, some are, no doubt, developed without arousing the awareness of the conscious self. These would be acts which facilitate the attainment of some conscious desire, but which involve no particular difficulty and can therefore be left to look after themselves. Under this heading might come such habits as that of looking right and left before crossing a busy thoroughfare. Any one who lives in a big city is likely to acquire this habit before long, but it is learnt with so little conscious effort that it is quite possible to take this precaution habitually, without being aware of the fact.

Habits which have been formed under the influence of complexes are of greater interest to the educator and will therefore be considered at

greater length. As we know, complexes are centres of potential activity, and consequently set free energy whenever they are stimulated by suitable percepts or ideas. This energy must find an outlet of some kind. Moreover, the well-being of the individual as a whole demands that that outlet should be one which the conscious self can pass as meaningless or harmless, otherwise the resulting activity will only relieve pressure in the unconscious at the expense of shame in the conscious. When an outlet of the right kind has been found, it is therefore likely to become habitual through frequent use.

The extent to which an individual acquires habits under the influence of unconscious complexes depends partly on himself and partly on the traditions of his environment. The greater the amount of self-control he has to exert, the more likely is he to take refuge in repression, and the more repressed complexes he has, the more meaningless habits is he likely to acquire. In fact the results of psycho-analysis seem to suggest that a very large number of our unconsciously formed habits owe their origin to repressed complexes.[1]

An example may make the process clearer.

[1] Consciously formed habits may owe their origin *indirectly* to complexes, for complexes can find relief through sentiments acquired for that purpose. To discuss these would, however, take us beyond the limits of this book. (Cf. account of little Anna's interest in geography, p. 84.)

Under favourable conditions the child who is just old enough to begin to look after himself gradually learns to accept the joys of childish friendships, and of construction and discovery, as substitutes for the pleasure he derived from the undivided attention of his mother. But until he has learnt to "sublimate" his energy in these ways, he is likely to experience the desire to be once again a small and helpless baby. This desire cannot come to consciousness without being repressed, for it is contrary to his conscious wish to become big and strong. It has therefore to find outlets which are not recognised as such, and psycho-analysis has shown that these outlets are often thumb-sucking and nail-biting. As is well known, these bad habits usually disappear without much trouble as the child grows older, that is to say, as he finds other more satisfying uses for his energy. (When the habits persist into adolescence there is every reason to believe that the child has somehow failed to sublimate his energy and is therefore in need of special treatment.)

We turn next to the mannerisms and tricks of speech which we tend to learn from our environment without conscious effort. It can be shown that these, too, are habits formed in the service of unconscious complexes. Most of us can recall occasions on which we grew half aware of a quickly repressed wish that we could be content

to act like, or live with, certain other people. If such a wish occurs just once, it may only be the outcome of temporary conditions, but if it recurs at intervals, there must be some permanent system behind it, and since that system is not in the conscious, we must look for it in the unconscious. Hence the revival of a wish of this kind, when we are fatigued or day-dreaming, may be taken as a proof for the existence of the corresponding complex. Given the complex, it must find a means of expression, and mannerisms and tricks of speech would serve its purpose admirably, just because they are likely to be passed as harmless and are yet such as to satisfy the unconscious desire to make some effort to resemble the members of the group in question. Thumb-sucking is a case in point, for there can be little doubt that it is a source of satisfaction to the unconscious of the child because sucking is a characteristic and highly pleasurable act of infancy. However, the child who habitually sucks his thumb is by no means aware of the origin of his habit ; he would indignantly repudiate the suggestion that he was *trying* to behave like a baby. (It may be well to remind the reader that such facts as the origin of thumb-sucking are discovered by the method of Free Associations, and that they are not present in consciousness until this method has been applied. Cf. p. 81.)

One further point needs consideration, that is the tendency to adopt local expressions or mannerisms, not only without conscious effort, but definitely, in spite of strong resolutions to the contrary. In such cases the unconscious complexes are evidently so powerful that they find an outlet whenever the conscious self is not on the watch. So long as the act in question is unfamiliar, it attracts attention to itself on account of the resistance which it has to overcome. But this resistance decreases with repetition until the act has become quite mechanical, and the conscious self is, therefore, no longer able to inhibit it. When this stage has been reached, the unconscious complex has secured for itself an outlet which it can use without hindrance, in spite of the fact that it is unpleasing to the conscious self. The success the complex has achieved in this way suggests that it must have been very powerful, for only a strong complex could have overcome the inhibition by the conscious self again and again until it finally succeeded in withdrawing its method of expression from conscious control by making it mechanical. Summarising the results of the last few paragraphs, we may say that *most unconsciously acquired habits are formed in the service of complexes, but some are also formed in the service of sentiments.* In conclusion, it should be observed that a habit can rarely be the product of some one isolated

tendency. Long before the end of childhood a percept tends to stimulate more than one centre of potential activity, and the resulting act is, therefore, due to a compromise between the forces that have been set free by it. Hence it is not strange to find that the habit which is formed in relation to any particular set of circumstances can usually be shown to be the product of more than one sentiment or complex.

At times it looks as though a particular habit must be due to "chance." This applies to such acts as taking possession of a particular peg in a cloak-room, or crossing the road at one particular point on one's daily walk to one's work. Whenever the reader feels tempted to interpret one of his habits in this way, he should bear in mind that "chance" is "an extremely complex system of causes, of the general nature of which we are aware, but of the detailed operation of which we are ignorant" (Yule, *Theory of Statistics*, p. 30), and if he examines a fairly new habit of this kind, he will, I think, always find that it owes its origin to a number of circumstances, some of which he is still able to recall.[1]

[1] The reader should note that we are here only concerned with the *origin* of habits. Thus, cycling is a consciously acquired habit, because we practise it until we can do it mechanically. If we analyse it, it involves a number of acts of skill, most of which are learnt most easily without conscious analysis. We are, however, not concerned with methods of learning.

C. *The Growth and Control of Consciously Acquired Habits of Choice*

It should be noticed that many of our habits are in themselves complex. Thus, neatness in written home-work implies both a certain amount of skill in the control of pen and ink, and readiness to set aside sufficient time for the work. The former is a matter of skill, the latter a matter of choice, and both must be rendered mechanical, if a true habit is to be formed.

Since we are mainly concerned with the growth of character, it will be convenient to omit the more detailed study of habits of skill and to confine ourselves to the study of habits of choice for the rest of this chapter.

(1) *Rules for Acquiring Habits with Minimum of Effort.*—It will be remembered that every habit is physiologically a path of weak resistance for nervous energy. Hence the growth of a habit is aided by every act which ensures the further weakening of the selected path, and it is hindered by any act which lays the foundation for a rival path. Moreover, the resistance is greatest the first time the energy is forced along a new path,

An act of skill, or any other habit, is acquired consciously if it is formed in response to a definite desire on the part of the conscious self. Whether this end is attained most easily by means of conscious analysis or by the "try, try again" method, makes no difference to its origin.

and decreases every time that path is used. If we bear these points in mind, we shall have no difficulty in formulating the rules for acquiring a habit with the minimum of effort. These are four in number :

(i) Since the resistance is greatest at the beginning, it is well to use a moment of enthusiasm for the first effort whenever a difficult habit has to be acquired.

(ii) Since every act slightly decreases the resistance to it on the next occasion, it wastes both time and energy to allow an exception to occur until the desired habit has become firmly established.

(iii) We have still to consider the treatment of undesirable habits. These may have been formed consciously or unconsciously, but once they have come into existence they only concern us as paths of weak resistance which we do not wish the nervous energy to use. Clearly, it is not sufficient to check ourselves in the act, for the nervous energy must find an outlet somewhere. The best thing to do is to adopt some one other line of action and to repeat this whenever we are aware of the stimulus, until it involves less resistance than the one to which we object. In other words, we can only cure an undesirable habit by associating another stronger habit with the same stimulus.

(iv) Finally, the amount of resistance the new habit encounters depends in part on the extent to which it satisfies the same sentiments and complexes as the old. It is therefore always worth while to discover the cause which was mainly responsible for the undesirable habit before deciding how to replace it. In some cases, such as that of thumb-sucking, it may then be found wise to remove the cause, instead of, or as well as, tackling the habit directly.

(2) *The Effect of Indecision on the Growth of Habits.*—Sometimes the difficulty which is experienced in forming a new habit is due to the fact that the individual has not clearly made up his mind what habit he actually wants to acquire. The way in which this lack of decision affects the development of habits of choice has been studied experimentally by *Dr. Boyd Barrett* in connection with the evolution of motivation. For a full description of this interesting investigation, the reader is referred to the book, *Motive Force and Motivation Tracks*. Here we shall only be able to give what is essential for the present purpose.

The method of investigation was as follows :—

Eight colourless liquids were prepared, such as to vary in taste from very unpleasant to very pleasant. Each of these was given a nonsense name (*e.g.* ziv), so as to avoid complications introduced by chance associations with this or that

word. The first part of the experiment consisted in teaching the subjects (*i.e.* the men who did the experiment) to associate each name with the right taste. After this the main part of the work was begun. In this each subject had to choose the better of two given liquids, drink it, and immediately afterwards give a full description of all that had passed in his mind during the act of choice. This introspection (as such a description is usually called) was taken down verbatim by the experimenter. Besides this, the time taken for each act of choice was measured by a special instrument, called the Vernier Chronoscope, which measures intervals of time correct to ·001 of a second. There were three subjects, all thoroughly experienced in introspection, and between them they were responsible for 574 experiments, in which the liquids were paired in different ways, each pair recurring at intervals. In this way habits of choice were gradually established for each pair of liquids. The evolution of such habits could therefore be studied in the introspections of the subjects. For a full account of these the reader is once again referred to Boyd Barrett's book. Here only two cases will be given : (*a*) one in which the choice was easy and, (*b*) one in which the choice was difficult.

(*a*) The results obtained in the first case are given in Table I. It represents experiments

TABLE I, SHOWING THE FIVE J—L* CHOICES OF S1.

(From Boyd Barrett's *Motive Force and Motivation Tracks*, p. 113.)

Reaction time in seconds.	Structural Phenomena.	Psychical Phenomena.			
		Feelings.	Presence of value.	Judgments.	Varia.
1·161	(1) Saw J first (2) Looked at L (3) Looked again at J (4) Took J	Pleasure and Certitude.	+ — +	"Not this" "That's right"	Void
·763	(1) Saw J first (2) Looked at L (3) Looked again at J (4) Took J		? — +	"It's the other"	Designation
·772	(1) Saw J first (2) Looked at L (3) Looked again at J (4) Took J		+	"It's the other"	Presence of word
·413	(1) Saw J first (2) Looked at L (3) — (4) Took J		+	"It's possible" "It's well"	
·493	(1) Saw J first (2) Looked at L (3) — (4) Took J			"It's the other"	Void

* J = Jor; L = Laix.

Table II, showing Nine L—C * Choices of S².

(Constructed from Introspections given by Boyd Barrett, *Motive Force and Motivation Tracks*, p. 164.)

Date of Exp.	Reaction time in seconds.	Structural Phenomena.	Psychological Phenomena.			
			Feelings.	Presence of value.	Judgments.	Varia.
Nov. 30	·759	(1) Saw L (2) Saw C (3) Saw L again and took it Did not drink L till long after	Regret and disappointment	—	This is bad C is not as bad as L	Void
Dec. 10	1·513	(1) Saw L (2) Saw C (3) Saw L and took it	Profound regret and annoyance	—	C is bad, but so is L	Inattentive at first
Dec. 13	2·131	Saw C, then L Passed from C to L about *six* times Took C Finally replaced C without drinking it	Discouragement		I can't decide Let's end it I ought to drink it I won't drink it	
Dec. 20	·678	Saw each about five times Took C Could not drink it	Lassitude and indifference		I can't decide They are equally bad This is beyond the limits of duty	Gesture of indifference

Jan. 18	Not recorded	Saw C, then L, then C Took C very slowly Drank C with difficulty	Discouragement Disgust		Discussion is useless Let's finish it I must drink	Recollection of difficulties experienced on previous occasions
Jan. 24	1·904	Saw C, then L, then C, then L Took C Put it away, finally drank it	Discontent		I can't drink it I must drink it *I know C better*	
Jan. 30	1·141	Saw C, then L Fixed eyes on L Took C quickly	Tendency to go from one to the other		C and L made choice difficult before, but this shall not happen again *C is the more familiar*	
Feb. 1	·937	Saw C, then L Took C quickly, automatically			Choice is easy No attempt to refer one to the other	Laugh of discouragement Recollection of previous choices
Feb. 8	·860	Saw L, then C Took C quickly, automatically			Take C	Slight recollection of long discussions on previous occasions

* L = Laix ; C = Choux.

Nos. 28, 42, 63, 84 and 90. These took place on December 3, 7, 12, 19 and 20 respectively. Of the two liquids, "Jor" was pleasant, "Laix" unpleasant. There was therefore no difficulty of choice.

If we examine the table, we notice the following points :—

(1) The reaction times decrease from approximately 1·2 seconds to ·8 second and then again to ·4 second.

(2) The structural phenomena are reduced to a minimum. After the third experiment the subject only looks at each liquid *once* before he makes his choice.

(3) The physical phenomena disappear with the exception of the one essential judgment, such as "It's the other."

(4) Feelings of pleasure and the reverse disappear even more readily than other phenomena.

In other words, automatic choice means economy both of time and of nervous energy.

(*b*) Table II gives a case in which choice was difficult, "Laix" and "Choux" being both so exceedingly unpleasant that neither was ever chosen unless pitted against the other. As will be seen from the table, the introspection show all the signs of hesitation, with the annoyance and weariness that attends it. The hesitation begins in choice 3, develops through choices 4, 5 and 6,

and is finally overcome in the course of the last three experiments.

The main points to be noticed in the first six introspections are :—

(1) The irregularity in the reaction times, which show two increases, each followed by a decrease, instead of the regular decrease that was obtained when the choice was easy (cf. Table I).

(2) The inconsistency in choice, *i.e.* the fact that "Laix" is taken twice, then "Choux" seven times. As shown above, every action lays the foundation for the corresponding habit. Thus even to take "Laix" twice would be sufficient to form a slight tendency to choose it, and would therefore make it a little more difficult to form a habit of selecting "Choux." Thus inconsistency of choice causes delay and waste of energy.

(3) The amount of oscillation from one to the other and the feelings of regret and annoyance that were recorded. These, too, would be responsible for much waste of energy.

The way in which the tendency to hesitate was finally overcome will be evident from introspection 7. This shows that the subject : (1) consciously avoided oscillation by fixing his eyes on "Laix," and (2) strengthened his motive for choosing "Choux" by appealing to the general principle "take the more familiar."

Finally, the success of this method is evident from the fact that the choice was felt to be easy once it had been adopted. (See introspections for Feb. 1 and Feb. 8.)

To sum up, the development of a habit of choice is hindered by: (1) careless, hurried or irresponsible acts of choice, and (2) regrets, annoyance, etc., over past choices. It is therefore well to formulate clear scales of value, whenever this is at all possible, and to appeal to some general principle when it seems impossible to decide between the different alternatives on any other ground. If we do this on the first occasion, we shall feel that we have a good motive behind our choice, and shall therefore not feel tempted to change our line of action after we have laid the foundation for a habit. In cases where choice is difficult, this will mean an appreciable saving both of time and of energy.

(3) *The So-called "Transference" of Habits.*— When we train children at school in neatness, punctuality, etc., we do so partly in order to make school-work possible, but mainly in the hope of providing our pupils with a nucleus of habits which they will find useful throughout life. It is therefore very important for us to know under what conditions our efforts are likely to meet with success in this respect.

It must be borne in mind that a habit is merely

an acquired tendency to act in one particular way in response to one particular stimulus. If, then, we change the stimulus, we thereby cause the nervous energy to take a different path, and have consequently no right to expect that we can still obtain the habitual reaction. Thus punctuality at school is in itself no guarantee for punctuality out of school. If the habit has only been formed in relation to school, it should theoretically only function in relation to school.

This theoretical conclusion is in agreement with the results obtained by *Squire*, in an experiment conducted to "determine whether the habit of producing neat papers in arithmetic will function with reference to neat written work in other subjects." She found that "the results were almost startling in their failure to show the slightest improvement in language and spelling papers, although the improvement in arithmetic papers was noticeable from the first." (See Bagley, *Educative Process*, 1905, Chapter XIII, p. 208.)

Yet, in spite of theory and in spite of experiment, we know that this is not a correct statement of the case. It is true that many a habit carefully fostered at school is lost in adult life, but many another survives, and though most persons are only neat in this or that, yet there are undoubtedly a certain number whom one could correctly

describe as "neat all round." There must therefore be some force at work which we have not yet considered.

The problem will be made clearer by reference to an experiment of *Ruediger*, which forms the complement of that of *Squire*.[1] Ruediger set out to discover whether "the ideal of neatness brought in connection with, and applied to one school subject functions in other school subjects." What exactly this is intended to imply becomes clear by referring to the first three of the instructions he gave to the teachers who were responsible for the training.

These are as follows :—

"(1) In the written work of one school subject pay all the attention you can both to the habit and to the ideal of neatness. Demand neat papers, have them re-written when necessary.

"(2) Talk frequently with the class on the importance of neatness in dress, business, the home, hospitals, etc., connecting it as far as you can with the subject under experiment.

"(3) Do not bring up the subject of neatness in connection with the other studies at school. If the pupils bring up these studies, quietly substitute something else. . . ."

It is clear from this that Ruediger aimed at

[1] The Indirect Improvement of Mental Functions through Ideals, *Educational Review*, November 1908.

developing a general desire for neatness as well as the habit of doing neat work in one particular subject. The result he obtained in this way is given by the following extract from the same paper:—

"Evidently neatness made conscious as an ideal or aim in connection with only one school subject does function in other school subjects. Directing our attention to groups 1 and 3 (the training was unsatisfactory in group 2), the most marked improvement of the papers occurred respectively in geography and arithmetic, the subjects in which neatness was emphasised, but there was unquestionable improvement on the average also in other subjects."

If we now compare Squire's experiment with that of Ruediger, we see that the vital difference between them is the difference in the generality of the desire that was used by the two experimenters. Clearly desire must have played its part in Squire's experiment, though no special mention is made of the fact. Otherwise there could have been no improvement in the work of the children. The interesting point is that the training these children were given was calculated to make them want to improve in arithmetic alone, and that this was, in fact, the only subject in which their work did become neater. Similarly, the improvement was more general in Ruediger's

experiment, because the desire that was stimulated was more general in this case. In other words, the children responded in each case to the training that was given. The inculcation of a limited desire produced a limited improvement, that of a general desire a more general improvement. Hence, when we see what appears to be a general habit at work, we are really only observing the total effect of a number of particular habits, each one of which was acquired separately in order to satisfy the more or less general desire which acted as the common stimulus for all of them.

In any particular case, both the extent to which a habit spreads and its permanence, must, therefore, depend on the desire which acts as stimulus or motive force. A child may look upon, *e.g.* punctuality as a rather superfluous virtue which is for some reason exacted by school authorities. He may yet be punctual at school, because he desires the approval of his teachers or schoolfellows. It is, however, very unlikely that such a child will "transfer" the habit to activities connected with his home life, or that he will be punctual of his own accord once the pressure of school opinion has been removed.

In other words, new habits suited to a change in environment will only be formed in so far as the motive that was responsible for the original habit is felt to be applicable to that environment.

Hence, the less a motive is bound up with any particular environment, the greater is the chance for so-called transference. Evidently the conviction that "this is worth doing for its own sake" is likely to produce the most widespread results, always assuming that it has real driving force behind it. How such a conviction develops will be discussed in the chapters on Character.

CHAPTER VII

EMOTION AND SYMPATHY

A. Emotion.
  (1) The James-Lange Theory of Emotions.
  (2) The Biological Value of Pleasure-toned Emotions.
  (3) The Control of Emotions.
B. Sympathy.
  (1) The Psychology of Pure Sympathy.
  (2) The Possible Effects of Tendencies which Check Imitation.
    (*a*) Indifference.
    (*b*) Expression in Emotion.
    (*c*) Desire to Help.
  (3) The Growth of Sympathy in Childhood and Adolescence.
    (*a*) The Importance of Personal Experience and Imagination.
    (*b*) Problems connected with the Self-absorption of the Adolescent.
    (*c*) Problems connected with the Awkwardness and Shyness of the Adolescent.

A. *Emotion*

(1) *The James-Lange Theory of Emotions.*—We saw in Chapter II that certain of the impulses may be accompanied by feeling tones so characteristic that popular usage has given them definite names. These are the emotions fear, anger, love,

hate, etc. They are states of mind with which every one is familiar in greater or less degree. Every one can therefore form some idea of their constitution by examining emotional stages of his own immediately after they have run their course. If he does this, he will find that each characteristic feeling tone is accompanied by physiological changes within the body which are in some way very closely connected with it. In the case of acute fear, for instance, the victim of the emotion trembles violently, he becomes covered with cold sweat, the hairs on the skin stand erect, his heart beats wildly and his breathing is hurried and irregular. If the fear is less extreme, the symptoms are, of course, not so well marked, but even then we can often tell that a certain person is frightened by what we call his "expression," that is to say, by the external bodily changes which form part of the system of the impulse to avoid danger. Indeed, so closely is the emotion connected with the bodily and visceral changes that accompany it, that it has been suggested that what we call emotion is really only the effect these changes have upon the mind. This is the physiological theory of emotions. It was enunciated at about the same time by *James* and *Lange*, and is therefore usually called the *James-Lange Theory of Emotions*. James states it thus: "The bodily changes follow directly the

perception of the exciting fact, and our feeling of the same changes as they occur is the emotion" (*Principles*, p. 449).

The main arguments in favour of this theory are the following :—

(*a*) We may get widespread bodily effects *before* the emotion is aroused. "If we abruptly see a dark, moving form in the woods, our heart stops beating and we catch our breath instantly and before any articulate idea of danger can arise" (*Principles*, p. 451).

(*b*) The bodily symptoms are so much part of the emotional state that there seems to be no emotion left, if we try to abstract from our consciousness all feelings of these symptoms. "Can one fancy the state of rage and picture no ebullition in the chest, no flushing of the face, no dilation of the nostrils, no clenching of the teeth, no impulse to vigorous action, but in their stead limp muscles, calm breathing and a placid face? The present writer, for one, certainly cannot. The rage is as completely evaporated as the sensation of its so-called manifestations, and the only thing that can possibly be supposed to take its place is some cold-blooded and dispassionate judicial sentence, confined entirely to the intellectual realm, to the effect that a certain person or persons merit chastisement for their sins" (*Principles*, II, p. 452).

The main argument against the theory is that it does not explain how different visceral processes can produce the same emotion. Why, for instance, do some people turn red, others white, with anger? It is, however, possible that the anger does, in fact, feel somewhat different in the two cases. Clearly the question can only be settled finally by means of experiments conducted for that purpose, but the results that have been obtained by different investigators are at present too contradictory to enable us to arrive at any conclusion. We may assume, then, that emotions cannot exist without accompanying bodily changes, but whether they are interdependent, and, if so, in what way, are problems which still await solution (cf. p. 108).

At the same time it is worth while to bear in mind that expression can, at any rate, initiate mild states of emotion and perpetuate strong ones. If we frown, we get a momentary feeling of anger, and if we can make ourselves "smooth the brow and smile," the anger seems thereby to become less.

(2) *The Biological Value of Pleasure-toned Emotions.* —The biological value of pleasure-toned emotions is another problem which calls for solution. At first sight anything beyond a keen desire to attain the end of the impulse (*e. g.* to escape from danger) would appear to be a hindrance rather

than a help, seeing that it uses up energy which might easily be expended more profitably. Every one knows how fatal it is to lose one's head at a critical moment, and to "lose one's head" is really neither more nor less than to let one's emotions gain the upper hand, that is to say, to dissipate energy in emotional expression instead of using it to select the best line of action.

It should be noticed that it only depends on the strength of an emotion whether it is pleasant or unpleasant. We rather enjoy feeling just a little afraid or just a little angry. We tend to prolong such experiences, instead of seeking to remove the cause of the emotion. As the student of biology knows, inborn tendencies which produce pleasure when expressed in action are on the whole of advantage to the individual. It is therefore not without good reason that a slight emotion is pleasurable. To understand what this reason may be, we need only recall that an emotion is produced when more energy is set free by the percept than is used in action, and that energy which is set free in this way normally seeks an outlet of some kind, so that an emotion is produced when there is surplus energy flowing through the nervous system. The fact that a slight emotion is pleasurable is, in short, Nature's way of teaching us to "think

before we leap," for it makes the time between perception and reaction pleasurable, and thus tempts us to prolong it when the need is not too urgent. We shall realise the value of this by considering what would happen if an individual always experienced acute discomfort in the period between perception and reaction. Under such circumstances he would naturally strive to react as quickly as possible. This would mean that he would always choose the most obvious form of reaction and would therefore find it very difficult to adapt himself to a changing environment.

(3) *The Control of Emotion.*—While a slight emotional state has thus an important function to fulfil, the matter is very different when action is delayed so long, or when the amount of energy set free by the percept is so great, that the individual is overwhelmed by his emotions. In such a case the means by which he tries to relieve pressure may act as safety-valves for energy that would otherwise work harm, but they do not, as a rule, help him to attain the end of the impulse which was the cause of the trouble. We are thus led to consider the advisability of preventing this kind of overflow by training children in self-control in the matter of emotions.

The first thing to realise in this connection is that an impulse cannot be killed. The nervous

energy which is set free by the percept may be driven into desirable or into undesirable channels, but it cannot be annihilated.

This may seem to be untrue at first sight, for every adult has learnt to be indifferent to experiences that would at one time have roused fear, anger or curiosity. It is, however, easy to show that this is due to a different cause. To take a concrete example: When moving staircases were first put into the stations of the London Underground Railways, it was a common occurrence to see people show real fear in stepping on or off these staircases, whereas most persons do it quite mechanically to-day. Those of us who had occasion to use these staircases frequently found that the fear quickly became slight enough to be nothing more than a little pleasurable excitement, and that it soon disappeared entirely. But this does not mean that we had cured ourselves of our fear of danger. What it means is that we had learnt from experience exactly what to do and how to do it. Thus the moving staircase ceased to be an unknown object which might prove dangerous, and in this way dropped out of the class of things that rouse the impulse to avoid pain and the accompanying emotion of fear. The next unknown thing that we have to face will undoubtedly again cause fear if it seems likely to threaten our

safety. In other words, every increase in knowledge and power will remove certain experiences from the class of things that rouse this or that emotion, but when a percept or idea does fall within a certain class, then it is impossible to prevent ourselves from experiencing the corresponding impulse.

It follows that we can never kill an emotion, even if it were desirable to do so. All we can do with an emotion which is liable to get out of hand is to learn to control it, or to repress it. Moreover, since the surplus nervous energy has to escape in some form, it is obviously wiser to guide it into useful, or at least harmless, channels than merely to block the outlet Nature has provided and trust to luck that it will escape without doing us injury. Hence mere repression ought always to be discouraged. How much self-control is desirable in a particular case depends in the main on the traditions of the community in which the individual has to live. A person who is felt to be rather cold in one environment is quite likely to be considered too emotional in another. Yet, since self-control prevents dissipation of energy, a certain amount of it should undoubtedly be acquired by every person who is not abnormally lacking in emotional life.

What exactly is involved in self-control can be discovered partly through introspection, partly by

studying the behaviour of others. If we follow these two lines of investigation, we shall, I think, find that it is really a complex result which is obtained by the co-operation of a number of factors. Fundamental to all is the conviction that self-control is desirable. But that alone is not sufficient. The individual has to learn both what to avoid and what to do before he is able to acquire the habits of choice which will give him the necessary command over himself. Usually he is left to find out these things for himself. Thus he discovers that a slight emotion tends to disappear, if it is not allowed expression. He may also learn that it is not safe to allow himself the luxury of dwelling on a strong desire, if he does not intend to satisfy it.

Then, too, he is likely to make certain discoveries on the positive side, such as the importance of keeping himself fully occupied when he is trying to free himself from something that is preying on his mind and the extent to which a really interesting task will help him in this connection. Besides this, he may learn consciously to divert superfluous energy into suitable channels, to "try, try again," instead of brooding over failure. At any rate he probably acquires certain methods of side-tracking energy while the impulse is actually at work. Thus some yawn when afraid, others sing when angry. It

is worth while to notice that people resort to devices of this nature without being aware of their purpose. Thus an individual may not realise that there is a connection between, say, his attempt to control his fear and his tendency to yawn, but this does not, of course, make the act any less effective as a safety-valve.

As devices of this nature are discovered they tend to be adopted, with the result that habits of choice grow up in relation to situations which the individual has to encounter with sufficient frequency. Thus self-control involves certain habits and certain knowledge, as well as the necessary desire. It should therefore not be expected from young children. The educator can, however, prepare the ground for it by finding suitable safety-valves when impulsive activity has to be checked, and by giving practical advice when the child is old enough to appreciate it. With preparatory training such as this the adolescent would find himself in possession of habits and knowledge which would make it comparatively easy for him to acquire true self-control—that is to say, power to divert surplus energy into useful or at least harmless channels.

B. *Sympathy*

If a boy comes upon a group of schoolmates who look frightened, he also experiences a pang

of fear ; if they seem curious, he begins to wonder what is happening. But if that same boy is passing through the stage of despising girls, he will pass a group of girls who look angry or puzzled with a cursory glance and the conviction that it is no concern of his. The same is, of course, true of adults. We have all of us reason to know that it requires a definite effort not to become infected by the emotional state of any one who in any sense of the word "belongs" to us, even when we have no idea what is the cause of his excitement. Yet the behaviour of people outside our "group" leaves us indifferent, or even arouses some contrary state of mind such as amusement or annoyance. The tendency to "feel with" other people is therefore closely bound up with gregariousness. The larger and the more numerous are the groups to which we feel we belong, the more often will this tendency be called into play. Any individual who belongs to our group for the purpose in hand will inevitably rouse it, any one who does not will as certainly leave us unaffected. It will be convenient to call *this tendency to feel with others of our own group pure psychological sympathy*, in order to distinguish it from sympathy in the popular sense of the word.

(1) *The Psychology of "Pure" Sympathy.*—We have already seen that gregariousness (that is to say, fear of solitude with or without the desire

for friends) tends to make us imitate the behaviour of others, and that this imitation extends to emotion as well as action. We know from our study of imitation that the reproduction of the actions of others is due to the interaction of one or other form of gregariousness with one or more sentiments or complexes. We have now to account for the reproduction of emotional states. It seems probable that this is primarily due to our tendency to imitate the expression of our companions, since it is sufficient to assume the typical expression of an emotion (*e.g.* the frown and the clenched fists of anger) in order to experience the same to a slight extent. But this does not explain whence we derive the energy to feel furiously angry as a member of an angry crowd when we do not even know the cause of the disturbance. Nor does it explain why or how we learn to notice so small a thing as the expression of another.[1]

The tendency to notice the expression of others is probably acquired during childhood under the pressure of the self-preservative impulses. A child is dependent on others for most of the good things of life and he usually finds out at

[1] We must become aware of an act before we can imitate it, but such awareness need not necessarily be conscious. It may be due to the activity of some unconscious complex (cf. Chapter. IV, p. 96). Both these points are therefore in need of further consideration.

a comparatively early age that it often only depends on the mood of his elders whether they give or withhold the necessary facilities for some exploit. Thus he soon discovers that the moods of others are worthy of consideration. It may be that experience would gradually teach him to connect certain expressions with certain moods, but as a matter of fact he is rarely left to his own resources in this respect. "Don't worry Father, can't you *see* that he is tired?" makes him at least try to "see," and "We can risk this to-day, Mr. X is obviously in a good temper," makes him anxious to acquire similar wisdom when the prediction turns out to be correct. Once the desire has been aroused, the rest is a matter of learning by trial and error. At first many mistakes are made, but there is no lack of practice and the child of seven or eight is often already quite expert in interpreting such forms of expression as come within his experience.

The strength which an induced emotion can acquire in a crowd can be explained in the following way. As we know, we produce a slight feeling of anger in ourselves by assuming the characteristic expression of anger, that is to say, we stimulate the system of impulse to fight by this means. If our expression is due to the fact that we are imitating the members of a crowd of which we form part, then our gregariousness

is active and the resulting desire (conscious or unconscious) to be like the others provides energy for the impulse to fight. Self-regard may be stimulated as well, if the persons whose anger induced ours happen to belong to a group of which we are rather proud to be members, for it is then impossible to own that they are in the wrong without at the same time hurting our self-respect. Thus a number of powerful sentiments and complexes may reinforce the original feeling of anger.

(2) *Possible Effects of Tendencies which Check Imitation.*—(a) *Indifference.* What happens thereafter depends on circumstances. We may allow the energy to take its primitive path : then we imitate the behaviour of our companions without giving a thought to the why and wherefore. If they fight, we fight ; if they run away, we run away. In such a case all the energy of the group will be expended in action, and there will then be little or no emotion. On the other hand, there may be no such outlet. Thus the crowd which is listening to an orator who is enflaming it with a desire to fight for some cause, has no outlet in action, because the enemy is not at hand. Hence the energy which is being set free takes the only path that is open for it, namely, that of anger and its expression. Moreover, the anger of any individual is fed by the anger of his neighbours if he identifies himself with the crowd.

Suppose, however, that some of the members of the audience feel superior to the rest of the crowd, that they have little belief in the orator, or enough knowledge to be aware that some of his statements are not accurate. Clearly these will remain calm and critical throughout the harangue, or, if stirred at all, will only be aware of a desire to oppose the orator. They do not acknowledge him as their leader, and are therefore not influenced by him. They do not acknowledge the crowd as one of their "groups," and are therefore not infected by its excitement.

(b) *Expression in Emotion.*—We may, however, "feel with" our companions and yet check the impulse to act like them. In that case there are two courses open to us: we may either decide to do nothing at all, or we may use our energy to help them in some way.

If we do nothing, the energy which has been set free tends to escape by the channel of emotional expression, since that is the only one which is open to it. As we shall see later, this provides us with a valuable source of recreation by enabling us to "live through" the emotions depicted in a work of fiction or engendered by the perception of beauty, without forcing us to express ourselves in action (cf. Passive Play, p. 225). On the other hand, it is not for the good of the community that an individual should

get into the habit of finding relief in emotion, since such a course can only end in self-indulgence and sentimentalism.

(c) *Desire to Help.*—If we are conscious of a desire to help our companions, the energy which was set free by observing them must have been diverted to stimulate the protective impulse. In such a case we may be stirred so deeply that we act first and think afterwards. As a rule there is, however, time for the self to wake up, and it then depends on the idea we have of our "self" whether we are willing to make the necessary sacrifice. If the cost is not too great, we allow the impulse to take its normal path, and consequently give help of some kind (cf. Protective Impulse, p. 42). Otherwise we check our desire to help and expend the energy that has been set free in various forms of emotional expression, such as assurances of what we would do, if we could.

It should be noticed that the sympathy which expresses itself in a desire to help always implies a certain degree of superiority on the part of the giver. At that moment he is, at any rate, not in the same difficulty ; the fact that he would like to help is sufficient to prove that. Moreover, if he allows the impulse free play, he provides so much more food for his self-assertion. Hence, giving without receiving in return is likely to lead to patronage, if not to pity. True practical sympathy

only exists between equals, that is to say, between persons who are able and willing to help each other.

Within our own group we respect our superiors, sympathise with our equals and pity our inferiors. Outside our own group we are dealing with creatures we do not know, with beings with whom we have nothing in common. They do not stir our gregariousness and are therefore unable to awaken our sympathy. If they seem dangerous, we avoid them ; if they seem weak and defenceless, we ignore them or use them to satisfy our love of power. When we are dealing with members of our own group sympathy often forces us to restrain ourselves. Here there is no such check. They are so different from us that we are unable to feel with them. If challenged, we should probably assert quite honestly, "Oh, they don't mind," or, "It does not hurt them as it would you or me." This is the attitude of mind which accounts for much of the cruelty of young boys. It is true that an act of cruelty is occasionally a form of revenge. If a child is repressed on every side and feels in revolt against his environment, he may suddenly discover that he can find relief for his feelings by maltreating a cat or a dog. Such a child may learn to enjoy watching the fear and suffering of his victims. But these cases are fortunately

rare. In most cases cruelty is simply due to thoughtlessness combined with self-assertion. The animal does not rouse the sympathy of the boy, because his groups are not yet wide enough to include it, and he can therefore ill-treat it without being checked by any feeling of remorse at the suffering he is causing. Obviously, cruelty of this kind can be prevented by awakening the boy's power to "feel with" the creature in question. In this way it is usually possible to turn the persecutor into quite an effective protector.

In dealing with the inferior members of our own groups we are not likely to be guilty of intentional cruelty, in spite of our feeling of superiority, because psychological sympathy makes us "feel with" them in their troubles. Moreover, self-assertion prevents us from imitating them and we must therefore either vent our energy in emotion or use it in giving help of some kind. Most people would, however, agree that serious harm is at times done by the help which is given in this way. This is due partly to self-assertion and partly to ignorance. As the recipients are our inferiors, we are prepared to find them different in some ways, and it is therefore easy for us to salve our conscience with the reflection that they "will not mind" when we are tempted to give help which will satisfy

our love of power at the expense of their self-respect. Moreover, it is only in the wider groups, such as those comprised by humanity and nationality, that we acknowledge them as comrades. In other respects they belong to groups about which we know nothing and for which we have consequently no sympathy. We are therefore unable to appreciate their needs as clearly as those of our equals and are consequently in danger of giving the wrong kind of help even when actuated by the best of motives. In short, the giver needs knowledge and self-control, if his help is to be of real use to the recipient. From the point of view of community life, it is therefore very important that young people should be trained to use their protective impulse to the best advantage. How far this is secured by encouraging them to contribute to public charities is at least open to question (cf. Protective Impulse, pp. 42–45).

(3) *The Growth of Sympathy in Childhood and Adolescence.*—Before concluding, it will be worth while to study the factors on which the growth of sympathy depends.

I shall begin with pure psychological sympathy. As we have just seen, this is the tendency to reproduce in ourselves the emotions which are being experienced by our companions. Thus the frequency with which an individual "feels with"

others depends primarily on the number of persons who are able to stimulate his gregariousness. This must in turn depend on the strength of the underlying sentiments and complexes, but the range of persons with whom he is able to sympathise can be greatly increased by providing him with suitable experience and by encouraging him to bring his imagination to bear on the problems which are raised by the conduct of others.

The Importance of Personal Experience and Imagination.—The need for personal experience becomes obvious when we reflect that we have to gather the mental states of others from their expression and their words. We can only see what we know. It is true that we tend to put *some* meaning into every act and word of our companions, but it is the meaning which is most in accord with our own experiences and it may therefore be hopelessly incorrect.

Children often give us an opportunity to realise this. They do not "see" when the adult is worried or tired, they do not understand when he tries to explain his point of view to them: A harassed peasant farmer is driven by the need for sympathy to tell his little daughter of five that he is going to clear a piece of waste ground single-handed. The child is greatly flattered by her father's confidence and vaguely

aware that there is something wrong, but his hopes and worries are quite beyond her. Anxious to show her interest, she finally asks : "And how about the bird-nests, father ?" (Bazin).

In childhood we are only able to "feel with" persons whose lives are very similar to our own ; but this is no longer the case as we grow older, for we gradually accumulate enough experience to be able to build from it or "imagine" the mental state of persons whose problems are somewhat different from any we have had to tackle.

During adolescence the individual should therefore greatly extend the range of his sympathies. In practice there are, however, great differences in the extent to which this is actually achieved. For some a chance word or a headline in a newspaper is presently sufficient to rouse them, others need a detailed account, or even the outward signs of joy or suffering to awaken their sympathy, and a certain number never learn to "feel with" any one whose life is at all unlike their own. No doubt this is partly due to inborn differences : the more gregarious a person is, the more readily is he interested in the doings of strangers ; the more imaginative he is, the easier does he find it to sympathise with them. All the same it is the environment which decides what use a particular adolescent learns to make of his powers, for he will check or indulge his

natural interest in another according to the standards of behaviour of those he admires, and he will do his best to understand the point of view of an inferior or rest satisfied with unimaginative patronage according to the example they set him.

The extent to which we experience "practical sympathy," or a desire to *help* those in difficulty instead of merely "feeling with" them, is clearly dependent on similar factors. Innate differences in the strength of the protective impulse must play their part, but the traditions absorbed from the environment are usually far more important.

The Self-absorption of the Adolescent.—The reader may have noticed that the sympathies of the adolescent usually develop by fits and starts. At times he is keenly interested in the doings of others, at times wholly self-absorbed and only able to see things from his own point of view. This is probably unavoidable. Self-preservation impels us to look after ourselves first of all. Hence the success or failure of a companion appeals to us primarily as something which might have happened to ourselves. It is true that we "feel with" the other, but we do not rest satisfied with that, if we are at all likely to be in the same position ourselves some day. In such a case our self-regard promptly makes us wonder how *we* should have acted under similar circum-

stances. Moreover, if we are compelled to admit to ourselves that we should have been unable to cope with the situation, it causes us to look upon the event as a personal warning, and thus impels us to do our utmost to acquire the qualities which we consider necessary. The adolescent is often in this position, for he is continually hearing or reading about things which might fall to his lot some day and which would certainly find him unprepared. Besides, he occasionally has unpleasant experiences of his own. Hence it is not strange to find that there are times when he needs all his energy for the solution of his own problems. When a youth is going through a phase of this kind he may become irritable and difficult, for the emotional strain can be very great and he is often only half aware of what is going on within him. In the right environment he is, however, all the better for his spell of egotism. Sooner or later he finds relief in hard intellectual work, in religious exercises, or in a combination of the two. Then his "self" gradually becomes less absorbing and he is once again able to think of others.

We may take it, then, that the periods of self-absorption to which the adolescent is liable are due to his efforts to prepare himself for adult life. The difficulties with which he is faced at such times make him peculiarly sensitive to the opinion

of those he admires; yet he rarely confides in them, for his thoughts are so vague and his fear of ridicule is so great that he usually finds it impossible to express himself in words. Hence it is often extremely difficult to know what kind of help to give. All the same, it is not wise to leave him entirely to his own resources when he is passing through one of these phases.

The intelligent youth soon discovers that the pursuit of knowledge or art can be very attractive for its own sake. As a rule he also finds that people rather respect him for his love of study, and that he can therefore always plead "work" when he wants to escape from some tiresome social obligation. Hence he is liable to become excessively self-centred, if he is allowed to think that no one has any claim on his time so long as he is doing his work properly.

Moreover, it is not always love of study that renders a youth self-absorbed, often it is rather fear of life that makes him take to study as a way out of his difficulties. This fear may be due to the example set by some one he admires, or to some shock he has experienced himself. In either case he is seldom aware of the bearing it has on his love of study. Often he does not even know that he is afraid, for he represses the unpleasant thoughts again and again under the influence of shame, and usually ends by "forgetting" them so

far as his conscious self is concerned. Unfortunately this does not mean that he has thereby conquered his fear of life, since that can only be done by facing the unpleasant experience squarely (cf. Complexes, p. 86). As we have already seen, the fear is merely driven below the surface of consciousness and is able to affect his behaviour as much as ever. Still, he has gained a certain amount in personal comfort. He has forgotten all about it, and can therefore honestly persuade himself that his dislike for social intercourse is merely a matter of "taste." Usually he goes a step further and decides that those who differ from him in this matter are both frivolous and superficial. Once this stage has been reached he is quite safe from painful recollections, for the opinions of those others cease to be worthy of his notice. Henceforth he can concentrate on his own development without a single qualm of conscience. Needless to say, the result is likely to be an individual who is both self-centred and narrow-minded.

It is difficult to deal with a case of this kind in its later stages, because the individual is perfectly satisfied with the course he has mapped out for himself. Ideally the emotional shock should, of course, have been avoided. Failing that, its effect can be minimised by giving the adolescent an opportunity to "talk it out" with a sympathetic

elder before he has begun to repress it. This, too, is often impossible, for pride usually impels a youth to keep his fears to himself. Thus he may have time to build up his defences fairly securely before we discover that there is anything amiss. In such a case a direct frontal attack is useless, for he does not consider himself at fault. It may, however, be possible to influence him indirectly through his environment. If he finds himself among people whose efficiency in his chosen pursuits is greater than his own, and who yet consider it wrong to allow their work to absorb all their thoughts, he may begin to wonder whether he has planned his own life wisely and may thus be led to try to overcome his dislike for social intercourse. Whether he succeeds in this will then depend on the amount of hold his fear has got over him. He may be able to conquer it. On the other hand, it may check him at every turn, making it impossible for him to "feel with" any one whose tastes are at all unlike his own. If he fails, there is still one other way of helping him. The forgotten fear can be brought back to his consciousness in the way that was described in Chapter IV (see p. 78). He can then be made to see the bearing it has on his other difficulties, and can thus be taught the importance of fighting it in the open. He may even then need encouragement from some one he respects, to make

him persist in his efforts, but with that he is almost certain to overcome his dislike in the end.

The Awkwardness and Shyness of the Adolescent.—Sometimes the development of the sympathy of an adolescent is checked in a different way. He does not consciously turn away from others, but he is practically driven from their presence by his awkwardness and shyness. He trembles and turns red in the presence of strangers, he may even begin to stammer—in fact, he shows all the signs of fear. It is easy enough to convince such a one that his fear of strangers is illogical, but that does not help him, for it does not touch the true cause of his difficulties. As analysis shows, that is always an experience which happened perhaps years ago and which was repressed at the time, instead of being faced openly. Thus *Dr. Bruce* gives us the following account of a young man who suffered from this extreme form of shyness: From among the half-forgotten memories of his boyhood there appeared the picture of his first employer—a stern, cold, hard man with piercing eyes. "Those eyes seemed to be on me everywhere I went. They seemed to be watching for the least mistake I made. I began to wonder what would happen to me if I did make mistakes. Then I began to feel incompetent, and to fear that he would notice my incompetency. I grew nervous, awkward, timid. Whenever he spoke

to me I jumped, I blushed, I trembled. After a time I did the same when anybody spoke to me. . . . I try not to think of him, but I know I do" (*Handicaps of Childhood*, p. 179).

In this instance the individual was cured by persuading him that the behaviour of his employer was the real cause of his difficulties, but that it need not affect him any longer and that he would therefore be able to conquer his shyness, if he made a serious attempt to do so.

Whenever a case of this kind is analysed, similar results seem to be obtained. We may therefore conclude that the extreme forms of shyness and self-absorption are usually, if not always, due to the repression of some painful incident which should have been tackled at the time of its occurrence.

CHAPTER VIII

THE PSYCHOLOGY OF CHARACTER

A. The Effect of Individual Differences in :—
   (1) Disposition.
   (2) General Attitude towards Life.
   (3) Will-power.

B. The Attainment of Strength of Character.
   (1) The Importance of Organisation and of the Choice of a Suitable Master-Sentiment.
   (2) The Limitation of Will-power.

C. The Meaning of a "Fine" Character.

CHARACTER may be defined as the sum total of all the tendencies which make for *consistency* in behaviour. When we speak of a person as lacking in character, we mean that he is abnormally impulsive and unreliable. When we do something foolish in a moment of excitement, we seek an excuse in the fact that we were not "ourselves" at the time. Thus the character of an individual is seen most clearly in his deliberate acts of choice.

As would be expected, the forces which determine his decision in such a case are partly innate and partly acquired. They may be enumerated as follows : (1) Such sentiments, complexes and

habits of choice or action as are involved at the moment; (2) his knowledge of the subject in hand and of his own limitations; (3) his intelligence or ability to make use of what knowledge he has; (4) his general attitude towards life; (5) his disposition, and, in cases where there are obstacles to overcome, (6) his will-power. Of these, the forces classed together in (1) have already been considered at sufficient length and the value of knowledge and intelligence is too obvious to need special discussion. We are thus left with disposition, will-power, and the general attitude towards life. These are of great importance to the development of character and will therefore have to be studied in some detail.

A. *Certain Individual Differences*

(1) *Differences in Disposition.*—The disposition of a person depends on the peculiarities of his impulses. It makes him irascible, timid or patient, as the case may be. As *Mr. Shand* points out in *The Foundation of Character* (p. 150), impulses vary in: (1) the range of stimuli that can arouse them; (2) the quickness of response; (3) the delicacy of response, *i.e.* the amount of response to the weaker stimuli; (4) the intensity of the response; (5) the duration of the response. All these can, no doubt, be somewhat improved by practice; thus the person who makes a special

effort to attend to weak stimuli will in time improve in this respect, but it will be found that such improvements will only take place within comparatively narrow limits.

What exactly the physiological basis of disposition may be is as yet largely a matter of conjecture, but it seems to be in some way closely connected with the constitution of the nervous system. Dr. Head has shown that lesions which affect the control of the "optic thalamus" (a portion of the lesser brain) by the greater brain produce an increase in the intensity with which stimuli are felt, and consequently in the corresponding reaction. "If the experimenter's nails gently scrape the subject's hand on the affected side, the latter may withdraw his hand, crying out, 'It is a horrid sensation, as if my hand were covered with spikes, and you were running them in: it is not painful, only very unpleasant . . .' Emotional experiences also are more pronounced in their effect, leading to excessive reflex motor activity on the affected side" (Myer's *Text-book*, p. 313). This suggests that differences in disposition depend in part on the way in which, and on the extent to which, the greater brain controls certain portions of the lesser.

(2) *Differences in the General Attitude towards Life.* —The general way in which an individual regards the problems he has to face depends to some

extent on his early environment. If a child has cause to feel neglected at home, if he belongs to a subject race or class, in short, if he feels at a disadvantage in any way, he is for that reason more likely to become pessimistic or suspicious. If he suffers from poor health and is not able to join in the games of the others, he is more likely to become introspective. In all such cases there is, however, something deeper which decides the extent to which, and the way in which, a particular ability or disability will affect the individual. This fundamental something is physiological in origin, and is conveniently studied under the two headings of temperament and perseveration.

Temperament.—As is well known, all the organs of the body throw chemical products into the blood, and receive their nourishment from the blood. This applies to the nervous system as well as to any other. Any change in its food makes it react differently and this in turn produces what we call a change in temperament. The thyroid gland furnishes, perhaps, the most striking instance of the way in which the functioning of an organ can affect temperament. This gland is a small mass of cellular tissue, situated in the neck near the "Adam's Apple." If it does not function properly, the patient may be reduced to a state of apathy bordering on idiocy, whereas too great activity on its part may throw him into a state

of excitement verging on that of a maniac. That it is really a secretion of this gland which can be responsible for all this, is shown by the fact that patients in whom the gland does not function properly can, as a rule, be restored to a normal state of mind by means of properly regulated doses of the thyroid gland of sheep.

It is also an established fact that certain diseases produce changes of temperament. Thus phthisis tends to make a person more optimistic, diabetes more pessimistic. It seems likely that this, again, is due to the chemical products thrown into the blood in consequence of the disease. In general we are probably right in assuming that every organ of the body affects our mental life to some extent through the products which it throws into the blood stream, and that the sum total of all these factors is responsible for what we call our temperament.

Perseveration.—This is the tendency for ideas and images to recur in the mind when the individual is making no conscious effort to recall them and when their recurrence is not due to the activity of some strong sentiment or complex. This tendency is strong in some persons, weak in others, but there is reason to believe that no normal individual is entirely without it. Its effect on behaviour is more far-reaching than may appear at first sight. The individual in whom

ideas of all kinds recur readily is likely to grow cautious and thoughtful, for experiences will tend to "perseverate" for some time and will thus have more chance of becoming fixed in his memory. Such a person will make a reliable leader when he has time to plan his course of action, but he may lose his head if he has to act on the spur of the moment. On the other hand, the individual who has only a slight tendency to perseverate is likely to forget past discomfitures with greater ease. Hence he will tend to be brilliant rather than thorough, daring rather than wise.

(3) *Differences in Will-power.*—Will-power may be defined as the power to strengthen a weak motive so as to make it predominate over its rival. If I and P stand for conflicting motives, of which I is the weaker, and E stands for the effort needed to make I predominate, then the relation between I, E and P can be represented symbolically as follows :—

I per se $<$ P ; I $+$ E $>$ P (James, *Text-book of Psychology*, p. 444).

It has been suggested by several writers that the effort E comes from the self as a whole, and that the power to make this effort is fundamental to any consciousness of a "me" as an independent individual.

Two important investigations into the psychology

of will-power should be studied in this connection. These are those of (*a*) *Dr. Ach* and (*b*) *Drs. Michotte and Prum.*

(*a*) The purpose of *Dr. Ach's* experiment was to study what goes on within us when we try to act on a decision which involves the conquest of a contrary tendency, such as a strong impulse or a well-established habit. He began by giving his subjects pairs of non-rhyming syllables to memorise, until strong associations had been formed between the members of each pair. He then showed them the first of each pair separately and asked them to give a rhyme to each instead of giving the syllable associated with it. Thus the process was in every way similar to that gone through by a person who has made up his mind to break a certain habit by forming another definite habit and has now to act on his decision. By making the associations stronger in some cases than in others, Dr. Ach was, moreover, able to distinguish between the task of opposing a strong, and that of opposing a weak, tendency. (In case it should be suggested that the experiment did not produce a "real" obstacle to overcome, it may be well to state that success and failure were found to produce definite feelings of pleasure and unpleasure respectively. Moreover, each was accompanied by expressive movements, such as smiling, flushing, on the one hand, stamping and

exclamations of anger on the other.) For a full discussion of the results, the reader must be referred to Dr. Ach's book, *Willensakt und Temperament.* For the present purpose, only the following points need be noted :—

(1) When the opposition was strong the introspections showed :—

(*a*) Feelings of strain, tension, etc.

(*b*) A definite consciousness of "I will, I really wish," in the period immediately preceding the act.

(*c*) A characteristic strengthening of the determination, which seemed to be only possible within certain limits, *so that the subject failed, much to his own annoyance, when the opposition was too strong.*

(2) When the opposition was weak :—

(*a*) All feelings of strain disappeared, and

(*b*) The personal element dropped out and there was, instead, merely the consciousness of "this must or shall be done."

Hence it would seem that we have a fund of extra energy on which we can draw when we are trying to overcome resistance, but that there are definite limits to the amount which we can use in this way at a given moment.

(*b*) The experiment of *Drs. Michotte and Prum* was intended to study the psychology of that other act in which we are conscious of an effort

of will, the act of choice. In this case, two numbers were presented to the subject which he might add or subtract, but whichever he chose he had to have a "serious reason" for his choice. Here again it is impossible to give more than the main result of the experiment. This is, that the subjects had in this case a consciousness of personally turning towards one of the alternatives, a "consciousness of action" as the experimenters called it. This "consciousness of action" was felt to be something quite different from the feelings of strain, etc., which these subjects also experienced in cases of difficulty. Like the "I really wish" of Dr. Ach's subjects, it seems to suggest that "the self" is involved in a peculiarly intimate way whenever true acts of will are performed.

The form in which we become conscious of this appeal to the self was studied by *Boyd Barrett* in the course of the experiment which was described at some length in Chapter VI. The introspections obtained by him in cases in which choice was difficult, showed that we either act on impulse (in which case the result is not a "willed" choice in our sense of the word) or appeal to a general principle, such as "take the more familiar." In other words, true acts of choice in which decision is difficult are characterised by an appeal to an idea which derives its energy more or less directly from the self-regarding sentiment.

The "characteristic strengthening of the determination" of Ach, the "consciousness of action" of Michotte and Prum, the "appeal to a general principle" of Boyd Barrett, all therefore point to the same conclusion, namely, that our will-power, *i.e.* the energy that makes it possible for us to overcome resistance within ourselves, is in some way derived from our self-regarding sentiment. Dr. McDougall puts it thus: "We may, then, define volition as the supporting or re-enforcing of a desire or conation (*i.e.* attempt to act) by the co-operation of an impulse excited within the system of the self-regarding sentiment" (*Social Psychology*, p. 249).

B. *The Attainment of Strength of Character*

(1) *Organisation of Sentiments.*—Since character is that which makes for *consistency* in behaviour, a person cannot be said to have a character at all until he has learnt to be somewhat consistent in his actions: thus a child cannot be said to have a character in any useful sense of the word until he has acquired at least one fixed sentiment, such as love for his mother. As his sentiments develop, his desires tend to become more permanent, and as his consciousness of his own individuality grows in clearness, he begins to exert his native will-power in service of these desires. But this is not sufficient to ensure ultimate strength of

character, for it does not prevent the co-existence of incompatible sentiments, such as love of truth and love of popularity. The really "strong" man is the man who has a definite aim in life and who cares about this aim sufficiently to abstain from gratifying chance desires which would involve him in activities that are not in accordance with it. Needless to say, fine will-power, though essential, is not sufficient. The person who wishes to acquire a strong character must also make up his mind clearly what he wants most of all and which, of any two alternatives, he wants more than the other. In other words, he must organise his sentiments in relation to some clearly-defined master-sentiment, otherwise his very strength of will may lead him into inconsistencies owing to the temporary predominance of some sentiment which is incompatible with his general scheme of life.

In order to attain strength of character with the minimum of effort, it is well to remember that we are so constituted that every act lays the foundation for a habit, every train of thought for an association, and that it depends entirely on the way in which we use this quality of the nervous system whether it proves a help or a hindrance in the attainment of the end. To quote from Mr. Shand (*Foundations of Character*, p. 70), "The laws of association tend to dis-

organise all systems of character, so far as they introduce into them constituents which are useless or harmful, and lead to the formation of bad habits ; but they also subserve them by strengthening serviceable connections, which lead to the formation of good habits. The law of organisation, on its side, tends to exclude from these systems all constituents that owe their presence there to the action of association alone."

(2) *The Choice of the Master Sentiment.*—Quite as important as the organisation of the sentiments, is the choice of the aim. The whole structure is liable to fall to pieces if the "master sentiment" is destroyed. It is, therefore, vital that this should be one which is not at the mercy of every passing event. To ensure this, an attempt should be made to formulate as "general" an aim as possible. The desire "to be successful" is more likely to make for strength than the desire "to be successful in a particular venture," and "to be useful" has a greater element of permanence in it than "to be useful to a particular person" ; since the failure of the venture or the death of the person may make the individual with the particularised aim lose all interest in life, whereas a similar check will leave the person with the more generalised aim with plenty of other things which are worth doing. Of course, even the person with a highly generalised aim may give up his

efforts in despair if he meets with failure after failure. How soon this limit is reached in a particular case would seem to depend on the native pugnacity or "will-power" of the individual, on his general attitude towards life, and on the extent to which his master-ideal has become incorporated in his self-regarding sentiment.

(3) *The Limitations of Will-power.*—One further point has to be considered in this connection, that is the difficulty which is sometimes experienced when it becomes necessary to act in accordance with a carefully considered resolution. This is a common phenomenon. It is perhaps most readily understood by comparing the act of choice with the lifting of a weight by a number of ropes, each pulling it in a different direction with a different amount of pull. In such a case one of three things may happen: usually the weight will move in a direction different from that of any of the ropes to which it is tied (a direction which represents, as it were, a compromise between their separate effects), but it may also move in the direction of one of the ropes, or it may not move at all. Even if it happens to move in the direction of one of the ropes, the effect of the others is not thereby lost, for they will either increase or decrease the rate of movement of the weight according to the amount and the direction of the pull on them. Each of these alternatives may occur in an act

of choice. The ropes fixed in direction may be taken to represent motives, the pull on them the driving force behind the motives, or motive force, as it is usually called, and the weight the problem which has to be solved. In the act of choice compromise is not always possible and selection of one course of action at the expense of the other alternative (*i. e.* movement along one of the ropes) is therefore more frequent, but here, too, the other desires play their part by affecting the ease with which the choice is made.

Moreover, if we tie only one rope to a weight and pull that, we get the effect of the pull on that rope separately, but if we now add another, we can only observe the way its pull affects the result obtained by the first. We have to resort to calculation, if we wish to decide what the effect of the second would have been by itself without actually removing the first. Similarly, when we have two alternative lines of action at our disposal, we do not, as a rule, become aware of the absolute value of the second during the process of choice ; we only judge it as better or worse than the first. But the absolute value of the alternative we have selected has an uncomfortable way of becoming conscious when we have to express a decision in action. At times we may even fail in the attempt, for the energy which was sufficient to make us choose one of two alternatives when we

were judging it in relation to the other, may be unequal to the strain when we are faced with the full amount of unpleasure it involves at the moment of action.[1] The extent to which a person is able to sacrifice immediate pleasure under such conditions is perhaps the best indication of his strength of character.

C. *The Meaning of a "Fine" Character*

In order to complete this sketch of the psychology of character, it is necessary to consider what is involved in a "fine" character. Clearly strength is one of its constituents, but strength alone is not sufficient. We judge the quality of a person's character at least as much by the nature of his master sentiment as by the consistency of his behaviour; in fact, of the two, many of us are more inclined to forgive weakness than what we consider a "poor" aim in life. By common consent a really fine man must have plenty of "strength of mind" and he must use his powers in service of a principle which we admire. Perhaps one other qualification should be added for members of a community such as ours, that is, a clear realisation of the personal prejudices for which he has to make allowance in all his decisions.

[1] Cf. Table II and Boyd Barrett, *op. cit.*, Chapter X.

As has been shown above, this means that he must, at least, realise that sentiments and complexes influence judgment at every turn. Ideally, he should also be aware of the most important of his complexes, so that he can allow for them in cases in which they are likely to affect his verdict.

CHAPTER IX

THE TRAINING OF CHARACTER

A. "Lawful" and "Lawless" Obstacles.
   (1) Lessons Taught by "Lawful" Obstacles.
   (2) The Artificial Manipulation of the Environment.
   (3) Approval and Disapproval as "Lawful" Obstacles.

B. Pleasure and Unpleasure as Incentives to Right Behaviour.

C. Intention and Execution.

D. The Part Played by Suggestion.
   (1) Direct *versus* Indirect Suggestion.
   (2) Difficulties in the Use of Direct Suggestion.

A. "*Lawful*" *and* "*Lawless*" *Obstacles*

One of the first discoveries a child makes when he is beginning to try his powers on his little world, is that he has to reckon with obstacles of two different kinds—those that seem to be no one's fault, and those that seem to have been placed in his way by some one else, the "lawful" and the "lawless" as we may call them.[1] He soon discovers that it is useless to get angry about lawful obstacles. But the "lawless" are on a different footing. They have been put in his

[1] The "law" in question may be a law of unconscious nature or of human nature, or it may be a mere convention. Lawful is to be taken to mean "in obedience to some fixed law," whatever the origin of that law, and "lawless" as the opposite of "lawful."

way by some one else and it just depends on his attitude towards that some one else, whether he takes them in good part or resents them as an unwarranted interference with his freedom of action.

(1) *Lessons Taught by "Lawful" Obstacles.*—At first the classification into "lawful" and "lawless" is necessarily very crude. The tiny child who knocks himself against a table hits that table in his anger, for he has yet to learn that the table cannot move out of his way. Similarly he eats the bright red berry without even wondering whether it may harm him. He must have time and experience to find out the forces which govern his little universe.

Sooner or later he learns that he cannot transgress the laws of his own nature without paying the penalty, thus he cannot sit about in damp clothes without catching a cold. As his experience increases, he finds with our aid that all that surrounds him, all the "not me" as it were, is also governed by laws that cannot be infringed without paying the penalty. Thus his building-blocks refuse to stand in certain positions however often he tries; his seedlings die if he does not give them any water; his companions do not like him if he is too quarrelsome, etc., etc. In every such case the child begins by assuming that the undesired act was done on purpose to annoy him, just as the savage

thinks that some evil spirit must have thrown down the stone which fell from the cliff and hurt him. Our knowledge of what is and what is not due to "law" is in fact the result of centuries of reflection on experience, and the child would acquire little or none of it without guidance from his elders.

Whenever a lesson can be learnt through direct experience, without undue risk to the learner, it is a mistake to try to save the child from the consequences of his acts, and this for three reasons : (1) because there is nothing so convincing as personal experience, (2) because every such interference is liable to rouse resentment, and hence to defeat its own end, and (3) because it is essential for every one to learn the difficult art of interpreting his own experience correctly and it is therefore advisable to give a child every opportunity of acquiring the necessary skill. There are, however, many cases in which the "lawful" consequences are too ill-defined or too distant to appeal to a child. Thus it would, for instance, be very unfair to a child to allow him to form a habit, the undesirability of which he will only be able to appreciate in years to come. In such cases we must, therefore, supplement the teaching of Nature and Man by means of artificial stimuli which are suited to the stage of development of the child.

(2) *The Artificial Manipulation of the Environment.* —This can sometimes be done by providing an artificial environment which the pupil assumes to be "natural," and which puts him into a position in which he is able to learn from his own experience. We can, for instance, teach an only child that selfishness is undesirable by providing him with suitable companions, and we can stimulate an adolescent to greater effort by putting the right kind of biography in his way. So long as the child does not know why he has been provided with companions, and so long as the youth thinks that it is "chance" that he has come across the book, the desired lesson will seem to each a discovery of his own, and his self-regard will therefore urge him to turn it to good account.

When such manipulation of the environment is impossible, we have to resort to methods in which the personal element is frankly avowed, that is, to expressions of approval or disapproval or to concrete rewards and punishments. The younger the child, the less will he be able to draw the right conclusions from his experience, and the more often will it be necessary to resort to personal pressure. It should, however, be borne in mind that punishments and rewards, as well as praise and blame, are only temporary expedients, and are by no means ideal incentives to right behaviour. Punishments and rewards

appeal primarily to the child's love of personal comfort and are therefore likely to make him selfish and self-seeking, if used at all freely. Indiscriminate love of approval is not much better, for the desire to stand well with every one is not likely to produce a very valuable member of the community. Ultimately, it is the man's ideals, not the opinion of his momentary environment, that should decide his line of action. As *Dr. McDougall* puts it, "the highest form of behaviour is that in which conduct is regulated by an ideal of conduct that enables a man to act in the way that seems to him right, regardless of the praise or blame of his immediate social environment" (*op. cit.*, p. 181).

Such an attitude towards the problems of life is clearly impossible until the individual has acquired a strong, well-organised character. In the process of attaining this he has to pass through certain preliminary stages, which Dr. McDougall enumerates as follows :—

(1) The stage of purely impulsive behaviour, in which the feeling tone which accompanies the actual experience is the only effective teacher.

(2) The stage in which conduct is influenced by the expectation of rewards and punishments.

(3) The stage in which the expectation of praise and blame is sufficient.

The first of these stages is passed through

during early infancy. A baby repeats pleasurable and avoids painful acts as far as he can, but threats of punishment and promises of rewards mean nothing to him. If a child is in danger of acquiring an undesirable habit at this stage, he can therefore only be checked by associating the act in question with physical pain, that is to say, by slapping him each time he does it; then he will gradually give it up on account of its unpleasant results. But once a child can understand what we say, and has realised himself, however vaguely, as a little individual with wants of his own, it becomes possible to control his behaviour to some extent by the threat of punishment or the promise of reward, and as soon as he has become sufficiently sensitive to the opinion of others, it is possible to discard these in their turn and to rely more and more completely on his love of approval.

Arbitrary rewards and punishments probably become unnecessary at a much earlier age than is generally realised, for quite little children seem to be able to interpret them as expressions of opinion. Even a child of eighteen months will often take a fall on the hard ground quite bravely, and yet scream at the top of his voice if his mother slaps him lightly but in anger. What little children need is a clear expression of our approval or disapproval, but words and manner are quite sufficient as soon as they are able to understand what we

say. I have known a little girl of three and a half years stop in the midst of her play to ask : "I am not being naughty, am I ?" when the adult who was playing with her, gave rather an impatient answer to one of her many questions.

The way in which an arbitrary punishment that is felt to be arbitrary is interpreted by a child may be seen from the following case of a very passionate girl of twelve. This child was considered "almost unmanageable" at school, although all kinds of punishments had been tried, even the use of the cane did not make the least impression. Yet the mother, who undoubtedly exerted an excellent influence over her, assured me that she could only manage the girl by "thrashing" her every time she was in one of her bad moods. For the onlooker it was easy to see why the mother succeeded where the school failed. The child worshipped her mother, she hated the school and despised her form mistress. The "thrashing" was a thing to be feared because it was an expression of extreme disapproval on the part of a person whose good opinion she valued very highly. But at school there was no such check on her actions ; to disturb the work of the whole class and make the teacher lose her temper appealed to her love of power ; the pleasure she derived from it was well worth the loss of play-time or an occasional caning.

If any one imagines that this is an exceptional case he should work for a while at a children's club and listen to the conversation. He will find that children invariably have most respect for the teacher who can manage his class without resorting to punishments and rewards, and that they interpret a system of frequent punishments as a sign of weakness on the part of the teacher. In short, rewards and punishments that are felt to be arbitrary are only effective in so far as they are taken to be expressions of opinion on the part of some one whom the child already respects. They are therefore quite unnecessary with normal children of school age, who have not been neglected too hopelessly at home. Even the little girl to whom reference has just been made managed to behave herself quite passably during the last three months of the school year at the request of some one whom she wished to think well of her, although no stimulus other than her desire for approval was used, and in spite of the fact that she never got over her intense dislike for her form mistress—not a mean achievement for a passionate girl of twelve.

(3) *Approval and Disapproval as "Lawful" Obstacles.*—Expressions of approval and disapproval are on a different footing from concrete rewards and punishments. They are the normal signs of group opinion, and as such, perfectly "lawful" in

the sense defined. If the group decides against the behaviour of an individual, he can either bow to its decision or ignore it, but he must be prepared to find himself ostracised if he dares to follow his own judgment in a matter of importance. The extent to which he is likely to mind this will depend on circumstances. If revolt against the opinion of his own group opens the membership of other groups to him, gregariousness and self-regard will both receive satisfaction. Yet the struggle may be severe enough, for he may know that his act is likely to weaken or break highly valued personal ties, such as friendships. If he does not know of any group which would approve of his attitude, he has nothing to fall back upon except self-regard. Normally, the fear of loneliness is so strong that it is impossible for any one to maintain his position under these circumstances, but he can sometimes escape from his dilemma by inventing an imaginary group to which he would belong if it existed. Needless to say, a revolt of this nature is usually the act of a ripe mind, it only occurs in childhood and adolescence if the individual finds it impossible to satisfy the requirements of his environment.

Thus praise and blame can be made to play an important part in the training of character. It should, however, be borne in mind that both must be used with discrimination to be effective. The

true function of an appeal to love of approval is to strengthen a motive which is too weak to issue in action without such help. It must therefore be strong enough to produce this effect. On the other hand, we must not give more praise or blame than the child feels he has earned, for both quickly lose their effect if administered too freely. Generally speaking, an act of choice soon becomes habitual under suitable conditions, but it should be remembered that a habit is always specialised, and that a small change in environment is often sufficient to destroy it. There is on record a case of a girl who managed to be at school punctually for a whole year, and who yet relapsed into her old habits of unpunctuality as soon as she was removed from the influence of the form mistress for whose sake she had made the effort. This girl was obviously quite indifferent about punctuality as such and her temporary improvement was entirely due to her desire to please her form mistress. She was, therefore, in this respect, wholly at the mercy of her environment. There is thus a distinct element of danger in relying too much on love of approval as an instrument in the training of character.

This does not mean, of course, that we should try to abstain from expressions of praise and blame. It means rather that we should grade them in accordance with the needs of our pupils.

The younger the child, the more freely must they be used, but it is a mistake to resort to them in a question in which he is himself able to appreciate what is right and what is wrong. If the environment is favourable, the child of ten or eleven has usually begun to realise that there are certain things which he cannot do without hurting his self-respect. As soon as this stage has been reached, we should therefore appeal to his pride rather than to his love of approval. This will have two advantages: it will help him to enter on the final stage of conduct, and it will render our expressions of approval and disapproval all the more effective just because they will not have to be used so often.

B. *The Relative Value of Pleasure and Unpleasure as Incentives to Right Behaviour*

The next point which we have to discuss is whether pleasurable or unpleasurable stimuli are on the whole more effective in the training of character.

In the case of "natural" punishments and rewards one is probably as good as the other, simply because each is recognised to be the "natural" outcome of a definite act. The boy who has once made himself thoroughly ill by eating too many green gooseberries will be more careful in the future, and the boy who succeeds

in solving a problem after a long struggle has all the reward he needs in the pleasure success brings with it. But, as stated above, praise and blame are used when the result of an action is not sufficiently obvious to serve as a guide for behaviour Their purpose is, in fact, to turn the weaker motive into the stronger. If we use fear of dis approval, we are weakening the stronger motive ; if we take the opposite course, we are strengthening the weaker one. Obviously the end can be attained in either way. The question is, whether there is anything to choose between them, and if so, which is the more effective.

In order to answer this question we have to turn to experiments that have been conducted to determine the physiological changes which accompany changes in feeling tone. Perhaps the most striking of these is one which measures the effect of pleasure, and unpleasure upon already contracted muscles. This may be done by means of a spring balance. The subject is blind-folded to avoid complications introduced by his own observation of his record, a spring balance is hung up at some convenient distance from him and he is then told to pull his hardest for, say, a minute. Under ordinary conditions his record shows a regular decrease, so that it can be represented by an almost unbroken, obliquely descending line. If the subject is now given a pleasant

stimulus (say a little raspberry juice) whilst he is in the act of pulling, there is a momentary drop, followed by a significant rise in his record, which then again falls gradually, but maintains throughout a higher level than before. If a very unpleasant stimulus is given (say quinine) there is, on the contrary, a decided fall in the record, followed by a gradual fall, so that the general level maintained is lower than under ordinary conditions. It would appear from this that a pleasant stimulus increases the amount of energy at the disposal of the subject, whereas an unpleasant stimulus decreases it. The same conclusion is suggested by certain other experiments.

Moreover, everyday experience points to the same conclusion : when we are happy, we usually move about, talk, sing, etc., when we are unhappy we tend to mope, without enough energy or interest in things to want to do anything. The way in which a pleasant surprise seems to renew our energy, however tired we were beforehand, is also worth noting in this connection. Similarly, appreciation from the right quarter acts as a spur to further effort, whereas lack of it may make one give up the struggle in disgust. (It is true that an unpleasant experience which rouses our "dis"pleasure increases our activity by stimulating our pugnacity. This more complex state of mind was not tested by the experiments

under discussion, nor does it affect our present problem.)

We may, then, assume that pleasure in general increases the amount of vital energy at our disposal, whereas unpleasure decreases it. Hence the expression of disapproval is effective, if we merely wish to check the activity of an individual ; but a pleasure stimulus is the better, if we wish to induce him to adopt a particular line of action. As was shown in Chapter VI, the quickest way to break an undesirable habit is to form another in its stead. Since our business in this connection is usually that of helping our pupil to form useful habits of choice, it follows that we should emphasise the pleasure that will accompany right choice rather than the unpleasure that will result from wrong choice. Thus, "I shall be so pleased, if you remember this," is more likely to be successful than "I shall be very angry, if you forget this," whenever the act that has to be "remembered" involves the conquest of some relatively strong habit or sentiment.

C. *Intention* versus *Execution*

Finally it is important to bear in mind that it is not necessarily the child's fault when he does "forget." Even Ach's subjects found it impossible to give a rhyme to a syllable when its association with a non-rhyming syllable exceeded a certain

strength. Yet these were adults with a well-developed self-regarding sentiment and they were working under conditions in which they might be expected to know with some exactness the strength of the contrary tendency they had to overcome. The child who promises faithfully "never to forget again," is often dealing with desires which he does not understand himself. To any one who has no knowledge of psychology, it may seem no more difficult to remember not to suck the thumb than not to give the associated syllable. Modern analytical psychology has, however, taught us that thumb-sucking is anything but a meaningless habit, that it is, on the contrary, a symbolical expression of the repressed desire to return to the care-free life of infancy, and that this expression is allowed free play by the growing self-regard of the child just *because* it seems meaningless. It is therefore an outlet for repressed vital energy, and as such far more difficult to conquer than a habit that has been acquired consciously. In cases of this kind a child has no idea what his promise "not to do it again" involves, and failure is undoubtedly quite as often due to lack of ability as to lack of goodwill.

Whether such failure is helpful, probably depends in part on the character of the person and in part on the kind of tendency that has to be overcome. Ach found that failure produced

anger, which set free more energy for the next attempt; whereas success, when achieved with sufficient difficulty, produced a consciousness of power which helped to strengthen future acts in so far as it was reproduced on the next occasion. Both were therefore found to be helpful. There is, however, no reason to suppose that this would invariably be the case. Suppose a person A who dislikes paying calls makes up his mind that he must without fail call on certain people to-morrow. To-morrow comes and a friend suggests that it is an ideal day for a long tramp. A "forgets" all about the call and spends an enjoyable afternoon on the hills. Later in the day he will probably "remember" the intended call, but the anger with himself for his forgetfulness will be considerably modified by his pleasure at having escaped what is to him an unpleasant ordeal. He may, on the other hand, "remember" his intentions and pay his call. Then one of two things may happen: he may find that it is, after all, not so unpleasant an experience, or he may decide that it was up to his worst expectations. The one will encourage him to be more regular in his social duties in future, the other will make him vow never to waste another afternoon in that way. This is more in accordance with the majority of the difficulties that children have to face, because it is an instance in which both success

and failure to "remember" produce satisfaction of a more or less conscious desire; whereas Ach's subjects derived nothing but unpleasure from failure. Hence it is, as a rule, safer to rely on the pleasure that accompanies hard-won success than on the anger that is produced by failure. In other words, though it is good for the development of the child to set him high standards, it is generally wiser to grade one's demands in such a way as to avoid failure as far as possible.

D. *The Part Played by Suggestion*

So long as a child depends on his momentary environment for his standards of conduct, he cannot be said to be "free" in any useful sense of the word, for the truly "free" individual is one who is able to "act in a way which seems to him right, regardless of the praise or blame of his immediate environment." Hence the "freedom" of an individual depends on the strength of his character. As we saw in the last chapter, this in turn depends partly on the extent to which he has succeeded in organising his sentiments and complexes round some master sentiment or ideal, and partly on the extent to which he has learnt to let himself be guided by his general principles and ideals when he finds it difficult to decide what he ought to do. It is, therefore, important to know

as much as possible about the growth of ideals and general principles.

When we try to trace one of these back to its beginnings, we find that it owes its existence either to the influence of some definite individual or to the pressure of group opinion, that is to say, either to prestige suggestion or to mass suggestion. Whatever its origin, it will, however, have to be incorporated in the self-regarding sentiment to acquire that element of permanence which is characteristic of ideals and general principles, for the life of a desire remains at the mercy of the immediate environment so long as it does not derive at least part of its energy from that sentiment.

In order to see what conditions favour incorporation in the self-regarding sentiment, we shall have to study suggestion and suggestibility in more detail.

Direct versus *Indirect Suggestion.* — We have already seen that the suggestibility of an individual may be due to his respect for the person who makes the suggestion, or to the consciousness that he is dealing with group opinion. We have now to consider how the force of a suggestion is affected by the way in which it is given. I may, for instance, persuade or force a child to do a task which he considers useless and distasteful, or I may, on the other hand, arrange things in such

a way that he thinks he would like to tackle that same task. In the former case I am said to be using "*direct*" prestige suggestion, in the latter "*indirect*" prestige suggestion. Similarly, mass suggestion may be direct or indirect. The newcomer who is put into the class of a popular teacher, may find that his attempts to disturb his neighbours are merely ignored by the others. If he takes this as a hint that he had better behave himself, he is acting on "*indirect* mass suggestion," if he waits until the others tell him not to make himself a nuisance, he is acting on "*direct* mass suggestion."

Clearly the success of indirect suggestion depends on the susceptibility of the individual to the opinion of others, that is to say, on the strength of his love of approbation and on his intelligence. If his love of approbation is weak, he will not be interested in the opinion of others, and will therefore experience no desire to conform to them. If his intelligence is poor, he will tend to draw incorrect inferences from what goes on around him, and will therefore be unable to learn from experience. On the other hand, indirect suggestion, if successful, has the advantage that it leaves the individual under the impression that he has discovered the advisability of a certain line of action by his own unaided efforts, with the result that his self-regard makes him anxious to act in

accordance with his discovery. In other words, the new principle of action will, from the beginning, derive its energy from the self-regarding sentiment, and its permanence will therefore not depend on the permanence of the influence of this or that individual, or on the pressure exerted by this or that environment.

The advantage of direct suggestion is that there is less risk of misunderstanding. It is, however, not advisable to use it too freely in connection with matters which affect the self-regard of a pupil, because every direct suggestion impresses on him that we consider him our inferior, with the result that it challenges the opposition of the strong-willed and hinders the development of self-reliance in the weak-willed. Moreover, care must be taken not to resort to it unless success is assured, for every failure lessens the feeling of inferiority on the part of the child, and thus makes it more difficult to exact obedience on a future occasion.

Difficulties in the Use of Direct Suggestion.—Skill in the use of direct suggestion can only be acquired through practice. The following hints may none the less prove useful. As will be seen, they are merely different methods of maintaining the feeling of inferiority on the part of the child.

(1) The suggestion must be given in a tone and manner that command respect.

(2) It is most likely to succeed when introduced so as to produce a slight shock or surprise ; thus the art of keeping a lazy pupil at work consists partly in having a large number of devices at one's disposal.

(3) It must not be so contrary to the pupil's training or natural bent that it rouses his self-assertion or criticism ; thus a boy with good home training will refuse to tell tales of another and will merely lose respect for the teacher who is foolish enough to demand such a thing.

(4) It must not contradict facts which the pupil knows or thinks he knows. In such a case, the only thing to do is to discuss the matter with him on equal terms.

Even if a direct suggestion produces the desired result, it must not be imagined that the amount of improvement that is produced can be taken as a measure of the strength of the new ideal which is being developed. This was brought out clearly in an experiment conducted by the writer for the purpose of investigating the conditions under which direct suggestion was likely to produce permanent results in the case of children aged twelve to fourteen. In this experiment the teachers of a number of classes undertook to stimulate in their pupils the desire to become more observant in regard to the everyday things of life. Two sets of schools were used for this

purpose. One set consisted of primary schools. In these definite practices in concentration of attention were given for fifteen minutes a day on four days of every week throughout a training period of twelve weeks and the children were told that these lessons were intended to help them to learn more about the things around them. The other set of schools consisted of secondary schools. In these the teachers were given no artificial aid of this kind and had therefore to rely on their personal influence alone, moreover, the training only lasted nine weeks instead of twelve. In both cases the children were tested at the beginning and at the end of the training period, and the practice effects of the tests as such were eliminated by comparing the improvement in these groups with that in other groups which had the same average marks in the first test, but were taken from schools in which no special training of this kind was being given.

The results which were obtained in this way showed that the secondary schools had derived far greater immediate benefit from the training. Intervals of nine weeks and sixteen weeks respectively were now allowed to elapse during which the teachers evinced no interest in their pupils' knowledge of everyday things. At the end of this second period a final test was given. It was

then found that the secondary school children had lost almost all the benefit derived from the training, whereas the others had lost very little, so that the training had evidently been more successful in the group which showed less immediate improvement.[1] (This result must *not* be taken to indicate in any way the length of training required to produce a permanent improvement, because : (1) the ideal was inculcated by different methods in the two groups, and (2) the groups represented schools of different types.)

Whether a direct suggestion will take root in a particular case, and if so how quickly, it is impossible to foretell without far more knowledge than is usually at our disposal. Some of the factors involved have been already discussed at some length. These are : the amount of influence the teacher has over the pupil, the strength of contrary tendencies within the pupil, and the extent to which his self-regarding sentiment is developed. Clearly his general environment must also play an important part in the incorporation of the new principle in the self-regarding sentiment, but we have at present too little knowledge in regard to the conditions which are favourable to this process to be able to say anything definite about it. Since so little is known, it may, how-

[1] A full description of this experiment will be found in the *British Journal of Psychology*, Vol. IX., Pt. I.

ever, be worth while to state a result which was obtained in the experiment just described. It is this : of the four schools that made up the group of primary schools, one alone failed to show any gain in the final test, although it had improved at about the same rate as the others during the period of training. There seemed to be nothing in the experimental conditions to account for its behaviour, but it so happened that this school was the only one of the four in which the children were promoted at the end of the term during which the training had been given. They were, moreover, not merely moved up in a body, but were distributed among a number of different classes. Since this was apparently the only way in which the conditions in this school differed from those in the others, we are led to conclude that the dispersal into different classes was responsible for the absence of permanent improvement. This would have a twofold effect : it would stimulate the development of new interests, and it would interfere with the working of mass suggestion. Hence a direct suggestion given to a whole class seems more likely to produce permanent improvement, if followed by a period during which there is no large influx of new ideas and no change in the constitution of the class. So far as I know, this is the only experiment which even touches on the matter. Much more work will evidently

have to be done in this field if we are to obtain exact knowledge in regard to the conditions that affect the growth of ideals, and such knowledge is clearly of the greatest importance to every one who wishes to influence the character of others.

CHAPTER X

WORK AND PLAY

A. Work as an Activity which is Initiated by the Consciousness of the Self as a Lasting Entity, Play as an Activity which is the Direct Expression of the Desires of the Moment.

B. The Activities of Children and Adolescents.
   (1) Activities of Children under Two and a Half Years of Age.
   (2) Activities of Children between Two and a Half and Seven or Eight Years of Age.
   (3) Activities of Children between Eight and Twelve Years of Age.
   (4) Activities of Adolescents after the Age of Twelve.

C. The Educational Value of Play.

D. Passive Play and its Reaction on Behaviour.

A. *The Meaning of Work and Play*

ANY one who tries to define the words "work" and "play" as used in ordinary conversation is faced with a difficult, if not an impossible task. We "play" hockey, but we "work" in the garden, though we may clearly enjoy the one as much as the other. It is sometimes said that in play alone we are absolutely free, but the member

of a hockey team knows quite well that he cannot drop out of a game because he does not happen to be in the mood for it. Again, an occupation is said to be "play" if done purely for its own sake, "work" if done for some ulterior purpose, but this, too, is not always in accordance with the popular usage of these words; thus much of the work that the amateur puts into his garden is done for the pure joy of it; he tires himself out with digging because he enjoys the exercise or the smell and colour of the earth, not because he thinks it is good for his health, or because he cannot get any one to do it for him.

Such vague use of terms is obviously impossible in a scientific discussion of various forms of activity. In psychology it is, therefore, usual to call *an activity "play" if done purely for its own sake; "work" if done for some ulterior purpose.* Thus digging is play if done purely for the joy of digging, work if done in order to prepare the ground for flowers or vegetables. We may now go a step further and inquire why we should want to prepare the ground for flowers, even though we do not enjoy the physical exertion which the process entails. Clearly the answers of different individuals would vary greatly in scope and in character. If we were to collect them all, we should, however, find that they have at least one thing in common: we do of our own

accord what we do not enjoy because we think that we shall benefit by it in the end. What any particular individual considers a "benefit" necessarily depends on his ideas of the needs of his "self." He may be trying to satisfy some highly generalised ideal, or he may only be desirous of providing himself with concrete luxuries. The one essential is that he is able to look ahead to a slight extent, otherwise there is no reason why he should think of anything except his immediate needs. Hence the power to work depends on the power to realise that the self of to-morrow or next year is affected by the behaviour of the self of to-day.

This knowledge is acquired gradually during childhood and adolescence. The baby is at first only aware of the pleasure or unpleasure which accompanies his acts, he has as yet no consciousness of himself as a lasting entity.

As his experience increases and as his mental powers develop, he learns that acts can have pleasant and unpleasant effects some time after they have taken place. His mother may get angry about a broken window an hour or more after the stone went through it, she may even deprive him of jam at tea-time for some misdemeanour of which he was guilty as long ago as that same morning. And the child who takes immediate reproof in good part will often resent

one that is deferred, for a little child considers even an hour after the event such a long time that it seems sheer spite on the part of the adult to refer to it again. However, bitter experience gradually teaches him that he has to reckon with the after-effects of his actions whether he will or not. As he learns this lesson, he becomes capable of true work, for his self-regard makes him formulate standards of attainment for himself, and these in turn make it possible for him to do the thing which is not particularly attractive at the moment for the sake of the pleasure which he will derive from it when it is done.

To sum up: *an activity is of the nature of work, if it is initiated by the consciousness of the self as a lasting entity; it is of the nature of play if it is the direct expression of the desires of the moment when these are not controlled by any thought of the more permanent needs of the self.* Clearly childhood is the time for true play, for it is only in childhood that we can satisfy each desire as it arises without thinking of the consequences. The adult usually finds it difficult to forget himself to the same extent and he is therefore happier when he is engaged in an occupation which is in accordance with his more permanent idea of himself as well as with the sentiments or complexes which happen to be active at the moment. Thus I may be very fond of digging for its own sake, but the

fact that my garden will benefit by the work I am putting into it certainly adds to the pleasure which I derive from the occupation.

B. *The Activities of Childhood and Adolescents*

We might expect that the average person would prefer to keep his body at rest and his mind a blank after a heavy day's work, but that does not seem to be the case. He may only be day-dreaming, if he is too tired to do anything else, but his mind is never entirely at rest so long as he retains consciousness.

In order to see how this stream of activity varies with age and environment, and how pure play is gradually displaced by a mixture of play and work, or, indeed, by work without any play, it will be necessary to study the occupations of children and adolescents in some detail.

(1) *Activities of Children under Two and a Half Years of Age.*—In so far as a child's activities are purely reflex, they are not purposeful, and therefore neither play nor work in the sense defined; but every baby soon discovers that certain acts are pleasurable, and as soon as this stage is reached he is able to form what we have called "primitive complexes" for these acts, and may therefore be said to be capable of play (see Chapter IV, p. 62). At first his own body naturally attracts much attention, but anything which

comes within his range is rubbed, scratched or pulled about. At eight or ten months he will be perfectly happy for hours enjoying the sounds he himself is able to make with his vocal organs. A little later he begins to enjoy running and climbing, building things so that they will stay, or throwing them down with a bang. Towards the end of this period we can sometimes observe slight attempts at "work": thus a child will occasionally try to say a word rightly to win approval; but such attempts are short-lived, for the child quickly loses patience and turns the attention of his would-be teacher to something else. On the other hand, he may at times be observed to be repeating to himself over and over again some new word or phrase. This is, however, play, not work, for it is done purely for its own sake in response to one or more impulses.

(2) *Activities of Children between Ages of Two and a Half and Seven or Eight.*—During the next five or six years the co-ordination of the coarser muscles are being completed, with the result that the child obtains control over his immediate physical environment. Thanks to this, his experience increases rapidly, and he has soon enough ideas to enable him to try his hand at building something new of his own. On the other hand, he has still so little knowledge that he is not hampered by any distinction between

the possible or the impossible, and so little power of reflection that he often finds it difficult to distinguish between what he has experienced and what he had only imagined. Hence imaginative play develops rapidly during these years. As a matter of fact, we can often observe the first signs of it at the age of two years and a half or three, but it does not become very marked till four or five, and usually reaches its maximum between the ages of six and seven.

If we examine the play of children between three and seven, we shall find that we can divide it roughly into unimaginative play and imaginative play, though the latter necessarily often involves the former.

The unimaginative play is similar to that observed during the first period. The healthy child seems to enjoy movement for its own sake : he is talking, singing, running most of the day, the one thing he finds irksome is to be quiet. At first he is still entirely destructive : he wants to pull things to pieces, to see what makes a noise, etc. But gradually other impulses come into play. He tries to make as well as to destroy ; he collects things for the sheer joy of having them. Then, as his control over his muscles increases, he begins to prefer play which involves a certain amount of skill. At about four years of age he wants to play with hoops and

tops, to hammer nails into a board, and so forth ; a little later he begins to enjoy skipping and dancing and is ready to be taught the use of ordinary tools.

For his imaginative play the child finds the necessary material in his environment. As was pointed out above, his gregariousness and his desire for knowledge make him notice what other people are doing, and his self-assertion makes him want to imitate all he admires. Thus he pretends to be his mother, his teacher, a sailor, a fairy, or anything else that strikes his fancy, and acts the part to the best of his ability. I once watched a child of about four playing at "engines." He himself was the engine, shunting, waiting for signals, etc., as he thought an engine would do. He began by instructing a child of about two and a half in the game. "This one," he said, pointing to himself, "has got a fire right inside him, and you put the water in here" (pointing to his mouth). He soon grew absolutely absorbed in his play, and forgot all about the younger child, who was doing his utmost to imitate him, but evidently did not know what it was all about. A child of five has usually realised that an engine is not a living being ; he prefers to be the engine-driver—with, say, a chair as his engine. But the difference between the four-year-old and the

five-year-old is merely one of knowledge. Both are using their imagination to express an interesting discovery in play.

As the child develops, his play tends to become more imaginative and more ambitious. At the age of six and seven the intelligent child often plans elaborate games in which younger brothers and sisters, as well as tables, chairs, etc., all have a part. It is in preparation for games of this kind that he probably gets his first ideas of work in the best sense of the word. He has done a little work for some years now, in the sense that he has done things he did not want to do in order to win approval or to escape punishment; but it is in play of this kind that he is for the first time making himself do something which is not particularly interesting for an end which he has himself conceived. Such exclamations as, "You *might* help!" show that he is not absorbed in the activity as such; if he were he would fiercely resent all help as interference. A little later his desire to make things may exact more work from him, for he tends to become more critical towards his own efforts as his knowledge increases. Then he begins to feel the need for instruction in the use of various tools. If he is taught properly he will enjoy the process, but even so, he is no longer playing as is the child of four who is hammering nails into a wall, for

he has a purpose in view : he wants to learn how to use this tool, because he wants to make, say, a boat that sails properly. His occupation is therefore technically a mixture of play and work—play because he enjoys it as such, work because it is not done entirely for its own sake. It may, however, become "pure play" if he grows deeply absorbed in it and forgets all about his original purpose : thus the child who is learning to read, usually passes through a stage when the reading of single words is so fascinating that he loses all interest in the story as such.

(3) *Activities of Children Between the Ages of Eight and Twelve.*—After the age of eight there follows a period of slow physical development during which the finer muscles are being co-ordinated ; hence the child begins to be able to handle more delicate tools, such as needle and fret-saw and consequently becomes increasingly interested in the acquisition of skill. As soon as the technical difficulties of reading have been overcome, story-books tend to absorb part of his playtime and, with the increase of reasoning power, puzzles, riddles and games of skill begin to come to the fore. Meanwhile the average child goes through a stage of being extraordinarily matter-of-fact : he loses all pleasure in the invention of stories and games, and concentrates instead on the puzzles which his environment presents.

The earnestness with which many a boy of eight or nine will listen to quite a technical explanation of the mechanism of engines shows how strong is his desire for information of this kind. It seems, in fact, as though a child of this age is at times so overwhelmed by the riddles of his little universe, that he has no energy left for anything else (cf. Impulse to Investigate, p. 47).

Another characteristic of this stage of development is the way in which the competitive spirit comes to the fore. Children of five and six do a thing because they enjoy it or because outside pressure is being put upon them. To urge them to do better than their neighbours is so much waste of energy, for they are still far too self-centred to be interested in the activity of others so long as it does not interfere with their own. By the age of eight, the child has, however, usually had occasion to learn that he is a member of a community, in which it is necessary for him to hold his own. Then he grows anxious to test his powers on every occasion : whether he is trying his physical powers, collecting stamps or playing a game of skill, at least half the pleasure he experiences lies for the time being in doing as well as this friend, or better than that other. At school, too, however attractive his lessons are made and however much competition is discouraged by those in authority, he will yet find means for comparing

his progress with that of his fellows, for Nature's call to him to find his place in the world is, as a rule, far too urgent to be resisted. As it happens, the desire to become a member of a gang is developing at about the same time (cf. gregariousness, p. 89), and can therefore be used at school to replace competition between individuals by competition between groups. Such group work is a good preparation for the next stage. It has, however, to be imposed from above, for it is not a normal form of competition for children under twelve.

To sum up, we see that pure play is gradually taking a more subordinate place during this period of a child's life. When he reads stories, listens to explanations of things that puzzle him, becomes a member of a gang, or satisfies his love of adventure actually or in imagination, he is probably doing for the sake of doing, with no ulterior purpose in view. But many of his spare-time occupations, such as his competitive games or attempts to make things, involve a mixture of work and play, in that they are done partly for their own sake, partly for some ulterior purpose. We saw above that the child of six and seven was beginning to do a certain amount of work unmixed with play (in the sense defined). Between the ages of eight and twelve there is a rapid development of this power, for love of approval and interest in games or hobbies are now supple-

mented by a competitive spirit which is continually urging the child to do things in which he takes little or no pleasure in order to hold his own with his fellows. Thus he begins to be able to do a fair amount of "pure work." If he refuses to make the effort, it is either because his attempts meet with too little encouragement, or because the end in view is one which does not appeal to him. (It is, for instance, impossible for a child to be seriously interested in that vague and far-off future when he will be "grown up.") The purpose must be one he can appreciate and his efforts must meet with a fair amount of success. If these two conditions are satisfied, the child of ten or eleven is capable of surprising amounts of "pure work."[1]

(4) *Activities of Adolescents after the Age of Twelve.* —After the age of twelve interests develop rapidly, if the environment is at all favourable. At times they become all-absorbing, and "pure play" disappears almost entirely in favour of that mixture of play and work which is characteristic of competitive games, of hobbies, and of school-

[1] Whether it is desirable that he should be encouraged to do such work is, of course, another matter, but one which does not concern us here. It may, however, be noted in passing that we have to appeal largely to competition or love of approval if we want "pure work" at this stage, whereas we can use interest in the ulterior purpose, if we wait another two or three years.

work, when it satisfies some strong impulse, such as the impulse to investigate or the impulse to construct. At the same time, the capacity for "pure work" is increasing, for the youth is becoming able to look ahead, and hence willing to work for an end which will not be attained for some time. At the age of twelve a few weeks is probably his limit, but at fourteen or fifteen he should be able to make himself do six months, or even a year of systematic work for which he has no taste and from which he will derive no concrete benefit before the end of that time.

Meanwhile, his desire to hold his own with his fellows is as strong as ever; self-assertion and pugnacity are quickly aroused, and with boys especially, gymnastic feats, boxing and fencing, remain popular throughout adolescence. At the same time, the desire to be a member of a group has become too strong to be ignored. Hence each wants to play with his fellows and yet find an outlet for his self-assertion. The result is, of course, "quarrelsomeness," and a general feeling that "the others" are spoiling the game. It is at this stage of his development that the adolescent is ready to enjoy organised games, such as hockey or football, for these provide him with opportunities of testing his powers without bringing him into conflict with his group. Moreover, there are fixed rules as to what is and what is not

allowed, and these have the authority of generations of players behind them. Their prestige is therefore so great that no adolescent would dream of questioning them, however irksome he may find them. Moreover, "passing the ball" begins to add to the zest of the game as the skill of the players increases, and cheating, or refusal to obey those in authority, is found to spoil sport instead of adding to it. Thus actual personal experience gradually teaches the players various lessons of the greatest social importance, and experience is, as we know, the only really effective teacher of such lessons.

Needless to say, these lessons cannot be learnt as readily as the rules of the game. Fair play, even if it is to the disadvantage of one's own side, and obedience to leaders of one's own choosing, even when their commands are unpalatable, are ideals which can only be established by degrees. Hence, an older umpire or coach, who teaches them as part of the game, is essential during the first few years. By the age of fifteen or sixteen the adolescent should, however, be able to manage his own game without help from his elders.

As already stated, the power of doing a thing purely for its own sake, without thought of ulterior purpose, is, on the whole, on the decrease during early adolescence, but this should be only a phase in the development of the individual.

Adolescence is the period during which æsthetic perceptions develop: gradually beauty of form, colour and sound become enjoyable for their own sake and sunset and sea begin to have messages which are none the less real because they are too vague to be expressed in words. There results much day-dreaming, but also a desire for self-expression which will sooner or later find an outlet in some form of art or craft-work, if only the environment is favourable. Work of this kind is true play in the sense defined. The worker is usually convinced that he has a good reason for engaging on any particular piece of work, but that does not prove much. Thanks to our traditions, it takes more independence of thought than is usual in adolescence to own, even to one's self, that one is putting forth strenuous effort without at least the desire to produce something "useful"; hence a purpose of some kind has its value in justifying one's occupation to one's self. We need, however, only watch the artist or craftsman at his work to see that the real attraction lies in the scope it gives for self-expression and that the ulterior purpose, so far from being primary, is continually in danger of being forgotten.

Another form of true play which does not develop until adolescence is the pursuit of knowledge for its own sake. At the age of fifteen

or sixteen young people often find this a fascinating form of activity, for it enables them to use their growing powers of abstraction and generalisation and satisfies impulses that are often in urgent need of activity, such as the impulse to investigate and the impulse to construct. As in the case of art work, the adolescent can usually give a reason for the task he has set himself, but where the task is of his own choosing, a little observation usually soon shows that it is really love of study which has made him attempt it.

C. *The Educational Value of Play*

The reader who has followed this description of the activities of children and adolescents must have been struck with the educational value of play. At first the child lives entirely in the present, and life is therefore all play; yet he is learning all the time. In play he gains control over his muscles, in play he imitates the adults of his environment and adopts their customs and beliefs. Then, as he becomes conscious of himself as a lasting entity, he begins to enjoy play mixed with work, but it is only towards the end of childhood that he becomes able to do "pure work" to any large extent. In adolescence play has still the same functions to fulfil as in childhood, but there are now additional reasons why adequate provision

should be made for it. Adolescence is the time when life seems full of perplexities, because irreconcilable sentiments are continually being brought into conflict with each other: respect for tradition with love of knowledge, desire for the safe life of the home with longing for independence and adventure. Unless the individual is handled wisely, the result is usually a state of nervous strain, which may show itself in various forms, such as violent emotional outbursts, morbid self-analysis, or that uncontrolled "giggling" to which adolescent girls seem peculiarly liable. And it is just at this stage that the mass of our young people begin to earn their living by work which, under modern conditions, is either quite uneducational, or, at best, so specialised that it only develops some small part of their inborn powers.

Probably life can never run quite smoothly during adolescence, even under ideal conditions, for the youth has to organise his sentiments and to submit himself to a certain amount of specialisation, if he is to become fit for modern community life. Overstrain can, however, be avoided by providing sufficient leisure and opportunity for hobbies and games. What will succeed in a particular case must, of course, depend on the taste and ability of the individual, but experience has shown that organised games and inde-

pendent constructive work (especially if of the nature of art work) usually meet the needs of the case by giving the youth that feeling of freedom and inner harmony which he often finds so hard to attain in his ordinary relations with other people. Besides this, he needs, among other things, gymnastics, swimming and dancing to develop his physical powers ; camping or walking tours to satisfy his love of adventure ; and last, but not least, time which he can call absolutely his own and of which he can therefore dispose as he likes.

The spare-time occupations of the adolescent are thus of the greatest educational importance, their function being : (1) to aid the development of his latent powers ; (2) to counteract the effects of unduly specialised or mechanical work ; (3) to act as safety-valves for the emotional strain which is unavoidable at this stage ; and (4) to teach him various social virtues through direct experience of their value.

D. *Passive Play*

The reader may have observed that nearly all the play activities we have discussed so far owe their attraction to the fact that they give us opportunities for self-expression ; we may be merely "letting off steam," or we may be trying our powers in one way or another; but

so long as we are playing, we must be conscious of free personal effort of some kind, otherwise we find our occupation dull, and turn our attention to something else. There are, however, other forms of play in which the pleasure seems rather to lie in the opportunity they provide for "self-*forgetting*": thus an interesting novel or a good performance at a theatre may become so absorbing that we find even such slight forms of self-expression as custom demands (*e.g.* clapping) a hindrance to our enjoyment. At such times the pleasure of the experience depends on the extent to which we can forget our individual needs and become part of the drama that is being presented to us.

Play of this kind is often called "passive play." This is, however, hardly a true description of it, unless it is intended to emphasise the fact that it renders our self-assertiveness passive for the time being. As every one knows, we are active enough in other ways. At times we succeed in identifying ourselves with one or other of the actors, and thus experience his joys and sorrows as though they were our own, and even if we cannot forget that we are only spectators, we must yet use a certain minimum of imagination if we are to enjoy the unravelling of the plot. As we concentrate on the drama, the mind becomes filled with it to the exclusion

of all else, with the result that we experience an impulse to imitate the actors (cf. Imitation, footnote, p. 147). Imaginative children at times act on such an impulse, especially if they are watching a staged play and are not merely listening to a story. They gradually learn that it is a pity to do this, partly because public opinion is against it, but quite as much because any attempt to act on such percepts necessarily destroys the illusion and thereby puts an end to their enjoyment. They then try to control the impulse, allowing themselves only incipient actions, such as the clenching of the fists and thus force the energy that is set free into the only path that is left for it, namely, that of emotional expression. Passive play of the kind we have described seems therefore to stimulate both the imaginative and the emotional life of the individual, and to depend for its existence on his ability to merge his own personality in that of others (cf. Psychological Sympathy, p. 150).

Much the same seems to be true whatever form of passive play we examine: the spectator who is watching a hockey or football match will take little pleasure in what he is perceiving, if he cannot identify himself with one or other side and thus give scope to his power to reproduce in himself the impulses that actuate the players (*e.g.* the desire to fight); and the person who is enjoying beauty, whether in Nature or in art,

probably depends on imagination and psychological sympathy in a similar manner, though his experience is often so vague or so complex that it is impossible to analyse it with any certainty. Finally, it should be noticed that true passive play is incompatible with criticism because the attitude of the critic is that of an outsider who is comparing *his* views or *his* interpretation with that of another, whereas passive play depends on our power to forget our own individuality and whatever else might spoil the illusion. As a matter of fact, our so-called passive play is in reality more often a mixture of the active and the passive, for we are only passive while we are absolutely carried away by what we are perceiving, and become active whenever the self wakes up sufficiently to wonder whether this change of plan was wise, or that act true to life.

To sum up, true passive play depends on the complete surrender of the self to the guidance of another and provides, in return, food for the imagination and for various emotions. All the same, it is not a sign of weakness of will to enjoy it ; there are many persons who are by no means lacking in self-assertion and who yet find it a fascinating form of play. Nor is it sufficient to point out that we often resort to passive play when we are too much fatigued to enjoy anything that involves effort, since we certainly derive at

least as much pleasure from it when we are feeling fresh and energetic. The attraction of passive play must therefore lie in the stimulus it gives to imagination and emotion. In the case of imagination, it is not surprising that activity is pleasurable, seeing that every imaginative act involves building up and is therefore a product of the constructive impulse which has, as we know, plenty of energy at its disposal.[1] It is more difficult to account for the pleasure we take in living the emotional life of another, especially if that other is only a creature of the imagination, yet the pleasure is real enough, as we all know from personal experience. Moreover, our enjoyment does not depend entirely on the quality of what we are perceiving. A really good book may fail to stir us if we are not in the mood for it, whereas quite a poor novel may hold us enthralled on a particular day because we happen to be attuned to it. Similarly we must be in the mood for watching a match, for perceiving the beauty of a thunderstorm, and indeed for any kind of play or work, in order to enjoy it to the utmost.

As in the case of active play and work, to be "in the mood" for an occupation is equivalent to wanting to do it. If then we may look upon sentiments and complexes as "storage batteries"

[1] It will be remembered that the activity of any impulse is pleasurable so long as it is not over-stimulated (see p. 139).

for nervous energy in the way we suggested in an earlier chapter (see p. 58), it follows that the nature of our mood depends on the distribution of our nervous energy at the moment, for the centres which have most superfluous energy will also have the greatest need for an outlet. In active play and in work most of this energy is expended in action ; in passive play this path is blocked and the energy has therefore to escape almost entirely as emotion. This suggests that passive play is of the nature of a safety-valve, of which the individual makes use when too tired for personal efforts or when he can find no other legitimate outlet for sentiments and complexes which are becoming overcharged with energy.

As was pointed out in the chapter on Sentiments and Complexes, the adolescent is particularly in need of a safety-valve of some kind, for he has so many contradictory impulses surging within him that he is likely to be faced with repression or rebellion as his only alternative if he is left to his own resources. We have also seen that organised games and art and craft-work are invaluable in this connection, but passive play is needed as well, for young people are at times assailed by longings—whether vague or definite—which they cannot satisfy in any other way.

Passive play has, moreover, another effect on behaviour which we have not yet considered. At

the moment the onlooker merely absorbs what is given him, but this is by no means the end of the matter. The more the percept has appealed to him, that is to say, the greater the relief it has given to unsatisfied impulses, the more will the individual enjoy dwelling on it afterwards and the more anxious will he be to try to imitate his heroes (cf. Suggestion, p. 198), so that his passive play is likely to affect both his work and his active play in the long run. This tendency may clearly be for good or for evil ; for good if the percepts suggest desirable outlets for what is simmering within him, for evil if they suggest either undesirable or wildly unlikely outlets. Thus a cinematograph performance may stimulate a boy to join the scouts or to learn life-saving, but it may also suggest to him that burglary or cheating would give him just those thrills for which he is longing. The little maid-of-all-work, who is on duty the greater part of the day, is driven to books to satisfy her longing for romance, but the penny novelettes to which she usually resorts can at best only make her feel that life is very unfair because the rich lover about whom she is always reading never seems to come her way.

To sum up, passive play affects behaviour in two ways : on the one hand it provides temporary relief for internal pressure by enabling the

individual to discharge superfluous energy as emotion, on the other it suggests possible activities for future occasions. These activities may, of course, be good, bad or indifferent, but it is the fault of the environment, rather than that of the adolescent, if his pursuit of passive play has an undesirable effect on his behaviour. It is sometimes held that this form of recreation is liable to encourage day-dreaming to a harmful extent. This may be true at times, but it is then usually the health of the youth or his environment which is to blame. It is rare for any one who is not lacking in vitality to prefer to let his energy evaporate in emotion, if he is given the opportunity to express himself in action; but he may none the less be driven to adopt this course, if it is the only one which offers him the satisfaction which he desires.

CHAPTER XI

CONCLUSION

We have defined education as the preparation for efficient citizenship and we can now see more clearly how important is the part which the community must play in this process. It is true that the possibilities of each individual are limited by the strength or weakness of his inborn powers and tendencies ; but character is the product of so many forces that it is safe to assert that every child of normal intelligence and stability has within him the material out of which a useful member of society could be fashioned in a suitable environment. It would be optimistic to imagine that many young people are actually given the opportunity of making the best of what is within them. Yet every failure means at least as much loss to the community as to the individual.

If our efforts are to be attended by more success in the future, the general attitude towards problems of behaviour will have to become far more scientific than it is at present. Not only the specialist here and there, but every teacher and parent will have to realise that the actions of

an individual are the outward expression of a highly complex system of forces which must be understood, if it is to be handled wisely. As a minimum every one who is responsible for young people should know enough about centres of potential activity to be able to judge what conditions are likely to be favourable to the growth of a particular sentiment in a particular case and to appreciate the extent to which sentiments and complexes influence both our own behaviour and our estimate of the behaviour of others. He will then be able to deal effectively with defaulters, because he will have learnt to see through an act to the motive behind it, and will therefore be able to remove the cause, instead of having to confine his attention to the symptoms.

As we have seen, an apparent failing may really be due to the fact that the environment does not provide a suitable outlet for a tendency which is in itself highly desirable. In such a case the cure is obvious. In others it may be necessary to help the youth to develop new interests, or to modify his idea of his "self" in some way. Here and there both teacher and parents will, however, come across a failing which does not yield to their treatment, either because they have misunderstood its origin, or because it is due to the activity of a repressed complex. In such cases they should be able to consult a trained specialist who is qualified to give

proper psychological treatment, but unfortunately it is at present only here or there that such a course is even within the realms of possibility.

In short, the psychology of behaviour teaches us that a community has only itself to blame for the vast majority of its failures and semi-failures, but that this wastage is likely to continue until there is a far more widespread appreciation of the importance of studying the forces which govern conduct. At present we are often trying to control where we should be trying to understand.

For convenience of reference I shall conclude by re-stating briefly the more important of the facts which have been established in the course of this book :—

(1) In the last resort every form of activity can be traced back to self-preservation, to race preservation, or to the combined effect of these two sources of energy.

(2) In the higher animal the ends of self-preservation and race preservation are attained by certain innate forms of activity which allow for varying degrees of adaptability. Of these the most primitive form is the pure reflex, which is an inborn tendency to react in one particular way to one particular stimulus or set of stimuli. Next come certain forms of behaviour which are partly under the control of the individual, and finally forms in which there is only an inborn tendency

to attain a certain end, so that the stimuli which rouse it and the reactions through which it seeks to attain its end are acquired through experience. The student of human behaviour is in the main concerned with the last of these—the "impulses," as they have been called in this book.

(3) Many of our impulses are connected innately with more or less complex systems of reflexes. Where such an organisation exists, *part* of the energy which is set free by the percept is drafted off automatically to the corresponding system of reflexes. This accounts for the bodily changes which accompany hunger, fear and anger and perhaps for the outward changes of expression which form part of every well-defined emotion.

(4) When more energy is set free by a percept or idea than can be expended in attaining the end of the impulse that has been roused by it, the surplus energy tends to escape through the reflexes which belong to the system of that impulse, with the result that we experience what we call an emotion. Much of this energy can, however, be diverted to other forms of activity and the extent to which an individual can prevent an overflow, by diverting it in this way in times of stress, measures his control over his emotions, or his "self-control."

(5) Every check to the free flow of activity of any kind tends to stimulate the self-preservative impulses. The resulting action depends on the

meaning which the obstacle has for the individual in question. If he regards it as dangerous, he becomes aware of a desire to avoid it ; if not, he is more likely to want to overcome it.

(6) There is reason to believe that memory and imagination developed primarily in aid of self-preservation and that every individual is endowed with a natural tendency to make use of his mental powers when he is faced with an obstacle which *he wants* to overcome.

(7) The way in which an individual interprets any particular stimulus depends on his previous experience and on his mood at the moment. His mood probably depends on the distribution of his nervous energy at the time, and this in turn is influenced by his disposition and his general attitude towards life.

(8) In the course of the second year of his life a child usually becomes aware of himself as an individual with needs and rights of his own. At first his concept of his function in life is necessarily crude and limited, but it tends to change throughout the childhood and adolescence and it remains liable to modification as long as the individual is able to learn from experience. In any particular case the final idea of the "self" is the combined product of the innate possibilities of the individual and of the pressure which has been exerted by his environment.

(9) In so far as a child is clearly aware of his own individuality, self-preservation makes him anxious to adapt his behaviour to his idea of his "self," with the result that this idea becomes a centre of increasingly great potential activity.

(10) Every individual tends to form sentiments for the persons, objects and ideas which affect the well-being of the self, either directly or indirectly. These centres derive their energy more or less directly from the self-regarding sentiment, and their strength and permanence are consequently dependent on the extent to which they fulfil some need of the self.

(11) There is reason to believe that impulses can become surcharged with energy and that they then seek relief through any object, no matter how unpromising. Once this has occurred, the object in question has thereby become a centre of potential activity, the permanence of which depends on the extent to which it is able to satisfy the impulse which is in need of an outlet, and, in the case of self-conscious beings, on the attitude of the self towards the resulting act.

(12) Gregariousness is in its simplest form the outward expression of fear of solitude. In human beings its manifestations are, however, usually complicated by the individual's need for friendship. Both of these are centres of potential activity which develop during early childhood and

affect behaviour throughout life in innumerable ways. Alone, or combined with other forces, they are responsible for the phenomena which we have studied in connection with suggestion, imitation, love of approval, sympathy and pity.

(13) When an object ceases to satisfy the needs of the self, the energy which was centred round it may be transferred to some other object, whether old or new. If this does not occur, the energy is reabsorbed by the self and usually finds an outlet in some form of day-dreaming, brooding or self-criticism.

(14) A centre of potential activity is indestructible so long as it is the only one which can satisfy some need of the self or provide an outlet for an impulse which is liable to become surcharged with energy. If the conscious self disapproves of a sentiment, it may succeed in "forgetting" the same, but this merely drives the system below the surface of consciousness, where it continues to affect behaviour by such means as are at its disposal. An undesirable sentiment can be rendered harmless: (1) by diverting the energy from it to some other object which satisfies the same need of the self, or (2) by modifying the idea of the self in such a way that that need ceases to exist.

(15) Sentiments and complexes tend to form in their service such new centres of potential

activity and such habits as are likely to help them to attain their ends.

(16) In so far as different percepts rouse the same centre of potential activity, they tend to produce similar habits, if they recur with sufficient frequency. The reaction to any particular percept can, however, only become automatic for that percept.

(17) Ideas which occur together or in close sequence tend to become associated together in such a way that any one of them is thereafter liable to recall one or more of the others.

(18) "The laws of association tend to disorganise all systems of character in so far as they introduce into them constituents which are useless or harmful, and lead to the formation of bad habits; but they also subserve them by strengthening serviceable connections which lead to the formation of good habits. The law of organisation, on its side, tends to exclude from those systems all constituents that owe their presence there to the action of association alone" (Shand, *Foundations of Character*, p. 70).

19) Will-power is the power to strengthen a motive by energy derived from the self-regarding sentiment. It is therefore the name given to the impulse to fight when that impulse is roused in support of a sentiment or habit.

(20) The strength of a person's character is

shown by the extent to which he is consistent in his behaviour.

In order to attain a really strong character, the individual must: (1) choose a master-aim which has a sufficient element of permanence to outlast the ordinary accidents of life ; (2) organise all his other sentiments in relation to this aim ; (3) form suitable habits of choice ; and (4) check the growth of habits and sentiments which are likely to hinder him in his purpose.

The extent to which an individual succeeds in developing a strong character depends : (1) on his will-power; (2) on his disposition or general attitude towards life ; (3) on the strength of the sentiment which he is able to form round his master-aim ; (4) on the strength of rival sentiments and (5) on the extent to which his environment proves a help or a hindrance.

(21) A strong character is not necessarily a fine character. We judge the quality of an individual's character at least as much by the quality of his master-sentiment as by the extent to which he is consistent in his actions.

(22) Work may be defined as an activity which is initiated by the consciousness of the self as a lasting entity, play as an activity which is the direct expression of the desires of the moment.

Childhood is the time for pure play, because the young child lives entirely in the present. As he

grows older he becomes capable of work, because experience gradually teaches him that actions are liable to produce pleasant or unpleasant results long after they have taken place.

(23) It is almost impossible to exaggerate the educational value of "pure play" and of those mixtures of work and play in which the play element is predominant. Occupations of this nature develop the latent powers of the individual, act as safety-valves in times of emotional strain, teach various social virtues through direct experience of their value, and, in the case of adolescents, counteract the effects of the unduly specialised or mechanical work which is often unavoidable at this age.

(24) "Passive play" depends on the complete surrender of the self to the guidance of another, and provides in return food for impulses and centres of potential activity which cannot find sufficient outlet in actual life. A case in point is the constructive impulse, which readily becomes overcharged with energy and which finds an easy outlet in the activities of the imagination.

(25) Passive play often lays the foundation for future play and work by suggesting new forms of activity to the individual. It is not likely to lead to undue day-dreaming in any person who is in normal health and who is given suitable opportunities of expressing himself in action.

(26) The psychology of behaviour teaches us that a community has only itself to blame for the vast majority of its failures and semi-failures, but that this wastage is likely to continue until there is a far more widespread appreciation of the importance of studying the forces which govern behaviour.

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