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# THINKING AND DOING

BY

HARRY ROBERTS

THE HOW-&-WHY SERIES

EDITED BY

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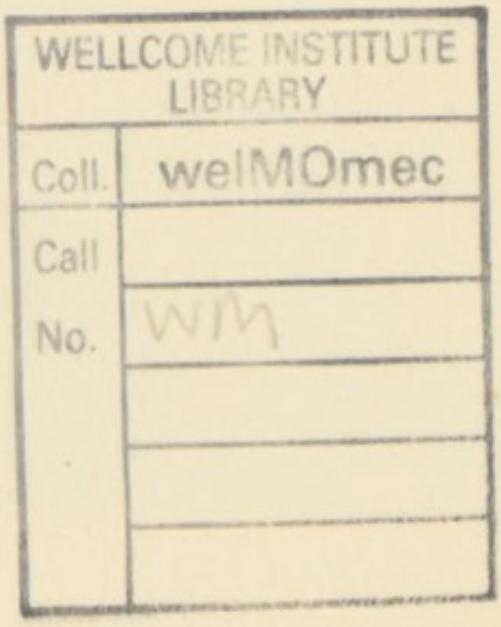


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## *TO OLDER READERS*

*This should not be regarded as a text-book of psychology. That science has not yet reached a stage which makes possible the production of even an elementary text-book that could honestly claim to be authoritative. This little volume is intended merely as a summary of facts which, although not universally realised, must be taken into account if we are to form sound opinions about human life and its manifestations. It may serve as an introduction, preparing its readers to study, in that critical spirit in which all such books should be approached, more ambitious psychological works. Incidentally, the writer has endeavoured to infuse the minds of his younger readers with doubts as to the foundations of some psychological dogmas which are too often pronounced with an air of pontifical infallibility. In any event, this book should help to promote that attitude of intelligent humility which is the first condition needed for honest study.*

Life is a pure flame, and we live by an invisible sun within us.

My soul, sit thou a patient looker-on;
Judge not the play before the play is done:
Her plot hath many changes; every day
Speaks a new scene: the last act crowns the play.

# THINKING AND DOING

## CHAPTER I

### WHAT THE BOOK IS ABOUT

WALKING along the field that slopes down to our garden, Flora turns her head to watch a nibbling rabbit half-way down the hill. As she does so, the basin she is carrying slips from her inattentive fingers and rolls down, startling the rabbit on its way. One after the other, the basin and the rabbit rush downwards towards the garden wall, both seemingly impelled by the same force. But presently a striking difference shows itself. As they near the wall, the rabbit suddenly changes its course, swerving aside to avoid the obstacle in front of it, whilst the basin pursues its headlong course, until it crashes into the wall and is smashed into a hundred pieces. There is obviously in the rabbit some safeguarding, some directing, force which the basin does not possess. In the face of danger, the rabbit has saved itself; the basin is at the mercy of external accidents—in other words, it has no power of self-direction or adaptation.

A basin is a relatively simple object. Let us consider something more complicated. There are few more wonderful machines than a motor-car. It can be made to do all sorts of useful and amazing

things. Watch that car going along the road; see how it swerves to avoid obstacles, how it slows down at corners, and speeds up when it has a clear road in front of it. It stops at the butcher's, crosses the road to the baker's, and then turns round and goes home, carrying the things that are wanted for to-night's dinner. The motor-car, in fact, seems to behave very much as the rabbit behaved. But here, again, there is a marked difference. The motor-car can certainly do much that the basin cannot do. It can run uphill, for example. But all those cautious acts which we observed—the slowing down and speeding up, the avoidance of obstacles, and so on —are not truly of its doing. Should the driver faint at the wheel, it would crash into the next wall or obstacle just as surely as the basin crashed when it rolled down the hill. It has no directing, adaptive, or self-preservative force of its own. That is added by the man who drives it. It is the man who supplied that element which the rabbit has in itself. This element or property is, so far as we can tell, present in every living creature. We call it mind.

This book is about the mind. Therefore we must consider how we can study it. In the first place, we must recognize that mind differs from what are called material objects—that is to say, things which we can see, or touch, or hear, or smell, or taste. Most of our knowledge of the world is built up of the impressions made on our senses, and of our memories of previous impressions. We recognize an apple, for instance, because we can see it, touch it, and taste it. But mind does not manifest itself in

this way. We cannot see, or taste, or hear a feeling or a thought; and yet we know that there are such things, because we have directly experienced them.

I am trying to introduce to you the science of psychology; that is, the science which describes and explains the mind and its workings. Of all the sciences, this is the most difficult to study. There is a science called physiology which deals with the body and its workings; and the physiologists have been able to amass a large amount of knowledge of these things, because they are dealing with something that they can see with their eyes, touch with hands, and weigh and measure with mechanical instruments made for the purpose. In other words, physiologists are able to make full use of their senses and, by means of them, to get at most of the facts that matter in their particular department of knowledge. They then apply their intelligences to these facts, and are able to group them together, or classify them, and to draw all sorts of interesting conclusions from them. The scientific chemist is in very much the same position. As a result, chemistry and physiology have advanced at a very great rate; and, about the main conclusions come to, there is very little difference of opinion among those who specialize in these subjects.

But, when we come to psychology, we find that we cannot rely entirely on the methods of study that have been found so effective in these other branches of science. We cannot take a piece of mind, put it in a glass tube, pour sensations and other impressions on it, and then watch what happens. Nor can we detach a few grains of emotion or

will-power, take them to our laboratory, and confront them with so much temptation, or with some artificial situation, and see how they behave. Our psychological laboratory is inside ourselves; and the only mental states we can possibly observe at first-hand are our own. All our other facts are second-hand. We know, more or less, how we ourselves feel and think when we act in particular ways; and if we find other people, built apparently after the same model as we are, acting in a similar way, we infer that they are feeling or thinking much as we should be doing in those circumstances. We can check our inferences by getting these people to tell us about their mental states; but that is also second-hand, so far as we are concerned. No one can see the whole of any act but his own. This, then, is one great difficulty in the study of psychology. But there are others.

When a chemist investigates the composition of material substances, so long as he is merely looking at them or measuring them, they remain unchanged. He would have great difficulty in discovering their properties if, directly he paid any attention to them, they changed into something else. Yet that is the sort of problem with which the psychologist is faced. If I am very frightened at something, and it suddenly occurs to me that now is my chance to study the emotion of fear, and I begin to turn my attention to the fear I am experiencing, the fear instantly begins to fade away; and, unless I am very quick, it will probably have all gone before I have been able to get any true idea of it. A witty philosopher has said that this business of intro-

spection, or looking at one's own mental states, is almost like trying to turn up the gas quickly enough to see how the darkness looks.

If, however, we really wish to study any science, we must not be put off by difficulties at the beginning.

Science means knowledge tidied up and put in order. It is concerned with the collection of facts, with the sorting of these facts into groups, and with the explanation of them. By explanation is meant tracing each event or phenomenon—that is, each fact—to its cause; and it is generally taken for granted—by scientists, at any rate—that by a cause we mean some previously occurring event or events that led to the occurrence of the one we are enquiring into. So long as we are dealing with non-living things, such as stones and tables and jugs, this sort of explanation is both useful and satisfying to our curiosity. We have sufficiently explained why the jug lies broken on the floor when we have shown that the hook from which it hung has slipped out of place; and we have sufficiently explained why the lamp went out when we have shown that the oil-container is empty.

Psychologists are very apt to offer similar explanations of human behaviour; but I feel sure you will agree with me that, in this department of knowledge, we want an explanation of a rather different sort. If I ask a boy why he ran away when I called him, or if I ask a friend why he has been spending eight hours a day in his study, I want to know, not only the previous events that led up to these acts, but also the future situations or circum-

stances which each had in mind—circumstances he was trying to avoid or trying to realize. It may be that the boy was smoking his first cigarette, or that the man was trying to write an introduction to elementary psychology. We cannot separate the idea of purpose or aim from conscious acts; indeed, it is doubtful if any explanation of the conduct of a living animal can be satisfactory if it does not tell us its purpose. This quality of purposiveness enters into everything we do. To put it another way: the cause of every act performed by a living creature is to be found in the future as well as in the past, in the forecast or prospect as well as in the retrospect. When ordinary people ask the 'why' of a human act, they are asking to be told its object or purpose rather than the story of somebody's past life. I believe that it is very largely because psychologists have tried to bring the phenomena of life under the same laws of cause and effect as those which chemists and physicists have found so useful in their sciences that the science of psychology has, until lately, been so barren of result.

There are certain questions that science can never answer, because the scientific method does not apply to the problems raised. Science, for instance, can never tell us, nor does it pretend to tell us, what is the ultimate purpose of life or of the universe. But then, equally, it cannot, and does not pretend to, lend itself to the discovery of what is sometimes called the Great First Cause of it all. These are problems for philosophy, and for that kindred branch of speculation known as theology. Science tries to trace the connection between one

event within our experience and another event within our experience; and, for all the scientists can say, the cause of anything may just as well be in front of it as behind it. I have said that all conscious behaviour—and probably there is in all animal behaviour some degree of consciousness—implies both looking backwards and looking forwards. Any animal that is capable of learning by experience—and this, probably, includes every animal in the world, no matter how small or how simple—shows thereby that it has the faculty of looking before and after. It must have in its mind, however dimly, a picture of past experience and a picture of a possible future experience—that is, of the goal at which it wants to arrive, the object it wants to achieve.

You may reasonably ask what is the good of trying to find out why we do the things we do, and why other people whose behaviour is generally much like our own sometimes act in ways so peculiar and so unexpected. In the first place, I am inclined to answer that it is a healthy and natural thing to do what we can to satisfy our curiosity; for I suppose that few of us are so satisfied with ourselves that we are not at times rather puzzled as to why we do such apparently silly things, or why such queer fancies come into our minds. That is one good use. Here is another. The more clearly we understand the nature of other people, and the circumstances that help to determine their acts, the more sympathetic we shall feel with them, and the less we shall be inclined priggishly to say or to think that they are more foolish or more wicked

than we are. Charles Wesley, who, with his brother John, brought about a great revival in religion, is reported to have said, when he saw someone being led off to the scaffold: 'There, but for the grace of God, goes Charles Wesley'—meaning that if he had been born with the same make-up as this poor fellow, and had been subject to the same circumstances and education and temptations, he would probably have acted exactly like this law-breaker. Jesus had a similar thing in mind when he said to the censorious mob, 'Let him that is without sin cast the first stone'. The spirit behind these remarks is what is meant by Christian charity. The more we understand of psychology, the more of this spirit we are likely to possess. So this is another very good reason for trying to understand how the mind works and what are the real motive forces behind human action.

Why we exist at all, and why we are what we are, we do not know; and it is probable that our minds are unfitted for the learning of such things. All the human sciences, if they keep to their proper job, are concerned with what things are like and how they are related to one another, and not with the ultimate *why* of their existence. Our minds, like our bodies, are obviously fitted to deal with the problems presented by earthly life. That does not mean that there is nothing more; it means that the methods of science cannot be applied to anything more. Science should not argue with religion or with faith, but neither should it trespass on their territory. Its true attitude is beautifully expressed in a poem of Clough's, which you may have read:

Where lies the land to which the ship would go?
Far, far ahead, is all her seamen know.
And where the land she travels from? Away
Far, far behind, is all that they can say.

Psychology, treated as a science, is really rather new. People have always speculated about the problems of thinking and doing, but they have never, until lately, applied to them the methods of unprejudiced experiment and observation which are the characteristic methods of scientific investigation. Therefore, apart from the special difficulties I have named, most of the current psychological doctrines cannot be looked upon as certain and final. There are very few theories and explanations about which all psychologists are in agreement, and I should not like you to take anything I may say in this book as not open to question. On the contrary, I want you to feel that we are merely talking this matter over together. I am telling you what I think is probable; and I want you to test this by comparison with the results of your own experience and your own observation, and to see if it seems to fit the facts. Above all, do not imagine that, when you have learnt all that psychology has to teach you of why we act as we do and why we think as we do, you will have got rid of the mystery of things.

# CHAPTER II

## HOW THINKING BEGINS

WHEN you come across words that are unfamiliar to you, you naturally ask—or ought to ask—what they mean. As you know, large volumes are entirely given up to explaining what words mean; that is to say, to defining them. Now, the only way in which we can usefully define an unfamiliar term is to translate it into other terms of which we already know the meaning. Very often, however, when we ask people to explain such a term, they merely re-express it in other words that convey no more meaning to us than did the word we asked about. Dictionaries are full of this sort of thing. When, for instance, I look up my dictionary to see what 'pucker' means, and I am told that it means 'to gather into wrinkles or folds', the information is distinctly helpful; but when I am told that 'consciousness' means 'the state of being conscious', or that the 'mind' is the 'seat of consciousness', I really am not a halfpenny wiser than I was before.

The truth is that we have some experiences which are so unlike any others, and some ideas or notions so distinct from all the rest of our ideas and notions, that it is simply impossible to define them in any useful sense. If you ask me what a Sweet William is, I can tell you that it is a flower, usually

borne in a head or cluster, on a leafy stem about nine inches or a foot high; that it is of various colours, generally composed of blends of red and white; that the individual flower is a little like a miniature single pink, and that it smells rather like a carnation. With some, or all, of these objects, colours, etc., you will be already familiar; and, consequently, I have been able to give you some idea of a thing of which you may never previously have heard or had any experience. But when I try to puzzle out how I am to define the term 'mind', and such related terms as 'consciousness', I, like the dictionary compilers, find myself up against very great difficulties. I cannot think of anything, other than themselves, in the least like mind or consciousness with which to compare them. I can only assure you that you have a mind; that is, something over and above—or, more correctly, incorporated in—your body, something that you cannot see or touch, yet something that makes you altogether unlike the material objects about you—even those that present such facsimile appearances as do some of the dressed-up waxworks at Madame Tussaud's. Mind is a name given to that part of you which includes your thoughts, your feelings, and your wishes, all of which are often spoken of as states of the mind. If, again, you ask me, What is consciousness? I find it even more difficult to think of words that will tell you more than you knew before. If you stop to reflect, you will be aware that you are now sitting in a chair or standing up, and that you are reading a book, and that you are either interested in it or bored by it. This awareness is what we mean by

consciousness. It is a property which we do not usually suppose to be possessed by non-living objects. We have no reason to think that a pebble knows that it is lying on the seashore, or that a mountain knows that it is high above the meadows and the valleys. A pin pricks us and we are conscious of pain; we hear a noise in the night and we are conscious of the sound, and very likely this impression is quickly followed by a consciousness of the emotion we call fear. I do not think we shall gain anything by spending more time over trying to put into words what we mean by mind and consciousness.

Many people—and I am one of them—have come to the conclusion that even the very lowliest animals of all are conscious of their every activity, and that we superior creatures are distinguished, not so much by possessing the faculty of consciousness, as by the very large number of acts necessary to our life that we perform almost unconsciously, thus leaving the centre of our consciousness free for purposes of a higher order.

Though they are often confused in conversation, mind and consciousness are not one and the same thing. I know that these terms do not convey very clear notions to you, but that is unavoidable. I have nearly as much difficulty in realizing them as you have. I, like you, am more accustomed to think about things that I can see, or touch, or hear. I must therefore try to explain in a roundabout way. What we may call the screen of consciousness—it will help you to follow what I am saying if you think of a cinema screen—is limited

in size, and, at one moment, includes only a very limited amount of experience. In other words, only a relatively small part of our mind occupies the screen of consciousness at one time. The picture is constantly changing; and the things in the middle of the picture stand out much more clearly than do those at the margin. This change, however, does not take place by jerks, but by a continuous slow fading of the thing that has just been taking up all our attention, whilst, equally gradually, something else is coming into view in its place. When the event or impression of which we have just been conscious fades away, it does not, however, really disappear from our minds. We know this, because later on—it may be months afterwards—the same impression again appears on the screen of our consciousness, not because the object which provoked it is again in front of us, but because we remember it, and we can tell that we are being conscious of a memory and not of an outside event actually happening.

Memory is one of the strangest powers we have, and I shall have more to say about it later on. The fact that it exists shows that our mind can, for months or even years, retain images of which during all that time we may not be conscious at all. We are always forgetting things, and then, suddenly, remembering them. Sometimes we try to think of somebody's name and simply can't recall it. Then, all at once, when perhaps we are thinking of something quite different, the missing name will come into the very middle of the screen of our consciousness. The thing to note is that con-

sciousness illuminates only a very small bit of the mind, or of the contents of the mind, at any one time. The greater part of these contents always lies buried or stored in what has been called—or, as I think, miscalled—our 'unconscious'.

Few people realize the number of things we all do every day without stopping to think about them. As a matter of fact, if we were not possessed of a directing power within us which attends to its business with more steadiness and persistence than we display in our worldly affairs, we should none of us remain alive for five minutes. The workings of this internal machinery of ours belong in part to the department of knowledge called physiology; and that is dealt with in another volume in this series.[1] But physiology, or the science of bodily workings, and psychology, or the science of mental workings, are not really so distinct as they were once thought to be. Indeed, many people believe that mind and body are but different aspects of one and the same thing; or, at any rate, that they are so inter-blended that one cannot be rightly discussed or understood without taking the other into account. Therefore, in trying to explain some of the manifestations of our mental life I shall occasionally seem to trespass on the ground of physiology.

The first thing we have to do if we want to understand ourselves and our acts and thoughts is to get rid of any snobbish notions we may have acquired—such notions, I mean, as that we are very different from other people, and utterly different from all the other animals who share this world

[1] *How You are Made.* By Amabel Williams-Ellis.

with us. Nearly everybody who has studied the matter now agrees that man has only very slowly arrived at his present position. Right away back, millions of years ago, our ancestors were as simple and as lowly as the humblest animalcule that you see when you look at a drop of pond water through a microscope. Step by step, our ancestors became more and more complicated, until at last a race of animals emerged much more complex and with much greater power over outside Nature than any other creature in the world. I cannot here go into the reasons that have made people come to this conclusion about our history; but some confirmation is given by the fact that every one of us does, himself, in his own lifetime, go through a series of stages of development very closely resembling the family tree which the scientists have drawn for us. The great difference is that, in our individual development, we go through, in a few months, a sort of hurried experience of the series of events that our species took thousands, or rather millions, of years to complete. For each of us, nine months before he was born, was a little microscopic cell in the body of his mother, looking uncommonly like the tiny creature—perhaps the simplest thing in Nature—called the amoeba. From such minute and apparently simple seed the human baby develops, having meanwhile passed through a number of stages in which it strikingly resembles a tadpole and all sorts of other creatures whom few of us are in the habit of looking on as near relations.

Unless we remember these facts, and bear in

mind the further fact that we inherit from our parents, and also from our more remote ancestors, not only our bodily make-up, but also the essential make-up of our minds, we shall find it very difficult, indeed impossible, to understand the true motives of many of our acts, or the reasons for many of our thoughts and wishes. We do not start life with a clean slate, on which we can write anything we like, or anything our parents or teachers persuade us to write. No sooner are we born than we begin to do untaught things of which we have had no previous experience. Nearly always, we start life with a cry, not because we have learnt that to cry is a good way to attract attention and win sympathy, but because, like Dr. Watts's dog, 'it is our nature to'. Unguided by personal experience or by teaching, the baby sucks its mother's teat, and its hands cling to an offered finger with a tenacity and a grip sufficiently powerful, in its very earliest days, to hold it suspended in mid-air. Clearly, the impulses to do these things are as much a part of the new-born child as are its nose and its feet and its eyes. And they are there for the same reason as are those bodily parts; that is, because they help, or at some earlier stage of human history would have helped, to ensure the infant's safety and survival. But here is the point I want to make at this stage. Some at least of our purposive acts are performed long before we can possibly have any acquired knowledge of their purpose or result.

All living creatures, including ourselves, are, as I have already pointed out, born with a quality not possessed by the inanimate objects around us—

such objects as stones, and water, and machines. We will provisionally call this quality vital energy. It is useless trying to define this term beyond saying that it is essentially a tendency to act on and react to our surroundings, and to go on acting and reacting as long as life remains in us. It is as though someone had given us a good shove-off which keeps us on the move. But this energy would be useless unless it worked in certain definite directions. Fortunately, there are born in us, together with this initial force, mental channels already dug, along one or other of which it naturally tends to run. The effect of our vital energy acting along these particular lines is to preserve our lives, and to secure the continuance of our kind. If there were no signals along our lines of railway, trains would soon crash into one another and get smashed up. And the same disaster would result if, when the engine-driver was given a warning signal, he had no brakes that he could apply, and no means of stopping his engine. Inborn impulses and tendencies have much the same object and much the same effect as have these signals and brakes and railway lines. Even the lowliest living organisms are so constructed that they automatically, when they recognize an object that might harm them, stop moving towards it and reverse their course.

At this point I shall be compelled to use another term probably new to you. When a bit of grit gets on to the surface of the eye, the eye waters. That is to say, certain glands called the tear-glands pour a lot of fluid over the eye's surface, often thus washing away the particle before

it does much harm. By no effort of will can we directly cause these glands to produce their fluid; and by no effort of will can we prevent their doing so when an accident such as that quoted occurs. Here we have a simple example of what is called a reflex action. If you look in the centre of someone's eye, you will see what appears to be a small black disc known as the pupil. If the room is somewhat dark, this disc (which is really an opening) will be relatively large. If, then, you flash into the eye a beam of light from an electric torch or from a candle, the pupil will instantly become smaller, thus lessening the amount of light falling on the sensitive parts at the back of the eye. This contraction and dilatation of the pupil is another example of reflex action. Further illustrations might be given until you were tired of reading about them. The sneeze provoked by pepper; the mouth watering at the smell of savoury foods when we are hungry; the quick muscular movements, which we call shivering, when we are cold—all these give an idea of the wide range of automatic reactions (or actions in reply) to external stimuli which threaten to harm us, or promise to help us.

What are called instinctive reactions are probably nothing more than complicated reflexes. The former term is sometimes reserved for inherited lines of action affecting the whole individual; whilst the latter is taken to mean a localized muscular movement such as blinking or sneezing.

In any case, reflex actions, which in us barely enter the field of consciousness, differ but little from the simpler instincts. Given the appropriate

stimulus, a reflex action is inevitable; but then so are many of the movements we call instinctive. The inborn channels along which our energy flows in the carrying out of these involuntary reactions are evidently deep and permanent. Some writers, indeed, do not distinguish between reflex and instinctive action; regarding instinctive responses, such as that of a dog hunting a rabbit, as chains of separate reflex actions—the position created by each reflex serving as a stimulus to another reflex, and so on until the ultimate object of the instinct (the catching and eating of the rabbit) is attained. The actual series of events is, according to this theory, pretty much as follows. Any hungry dog has an urge to wander about, apparently aimlessly. In the course of this wandering, he comes across the scent of a rabbit. The scent provokes another urge, that of following the scent. Up to this point, there is no reason for supposing that the dog has in his mind a picture of a rabbit, or even of a dinner; for we know that, when we take our dog out for a walk after he has had a good meal, it is very difficult to keep him from rushing off, with his nose to the ground, if he happens to cross the track of a rabbit. At a certain point in his career he sights the rabbit. This gives him another impetus, and he becomes much more excited. Only then, it is argued, can he be said to be consciously hunting the rabbit.

Whether or not this is a true account of some of the complex activities of animals had better, for the present, be regarded as an open question. We certainly have poor grounds for arguing that animals

and man performing similar series of acts which terminate in similar ends or 'purposes' are impelled by utterly unlike forces.

A neighbour and friend of mine has a goldfinch whom he has educated to a pitch not generally thought attainable by a bird. When he wants a drink of water, this bird has learned to draw up from a small tank, a foot or so below the alighting board of his aviary, a little thimble-like bucket connected with the board by a fine chain. He first seizes this chain with his beak, and, having hauled up as much of its length as is possible by raising his head to its highest point, places his foot so as to fix the chain to the board, and again applies his beak to the chain below the board level, and repeats the performance. Six good hauls by beak and claw are needed to raise the bucket to a drinkable level. Having emptied it, the goldfinch allows the bucket again to descend to the tank, and, if his thirst is not quenched, repeats the whole series of movements. It needs something more than prejudice to enable one to describe the goldfinch's achievement as other than the fruit of intelligence, indistinguishable in kind from that which many people imagine or persuade themselves is peculiar to man. Probably some intelligence is involved in every act we call instinctive, and some inherited instinct involved in every act or thought we call intelligent.

> A tear is an intellectual thing,
> And a sigh is the sword of an angel king,
> And the bitter groan of a martyr's woe
> Is an arrow from the Almighty's bow.

In carrying out their reactions, there is reason to

believe that animals, whether or not they have in mind the ultimate purpose, are usually conscious of the various steps which they feel impelled to take. Usually, their impulses are made additionally compelling by the pleasurable emotion, or relief from painful strain, that accompanies them. It often happens, as I have said earlier, that a reaction which originally served the interest of life-preservation or of race-preservation involves a series of stages, each of which may be pleasure-yielding quite apart from the comfortable feeling which accompanies the achievement of the ultimate aim of the whole proceeding.

We thus find many examples of instinctive urges surviving long after the fulfilment of their original object can give any possible satisfaction. We are drawn, or, rather, our inclination is strengthened, by the pleasurable associations of some half-way stage, which was at first but one step of many leading to a life-preserving end. The widespread love of hunting, for instance, and the equally common restlessness and desire for travel which periodically overtake us, are probably thus explainable. Originally, when our ancestors lived wild and difficult lives, the urge to wander in search of food, and to hunt it when seen, was essential to self-preservation. But, nowadays, this can rarely be the motive. Moreover, the course of any of the instincts, to a very great extent in man, and to a lesser degree in the higher domestic animals, can, by training and education—that is, by the building up of pleasant and unpleasant associations—be modified out of recognition. People who

write and talk about these things do not always distinguish between what may be called Nature's purpose in furnishing us with a particular instinctive inclination, and the aim which the human or other animal has in mind when he follows this inclination. This distinction is, however, obvious when we consider our involuntary reflex actions. Nature's purpose in the reflex closing of the eyelid when danger threatens the eye, to take our previous example, is the preservation of our sight, and so of our fitness to fend for ourselves. But we cannot be said consciously to have any aim in the matter at all. We blink because we cannot do otherwise, not because we feel it to be a wise precautionary measure. The reactions we call instinctive are mostly more complicated than this. Whether or not the reactions have been modified by experience or training, there is nearly always a wide difference between their original purpose and the conscious aim. For example, in breaking down the long prairie grass and making himself a safe and convenient lair, the wild dog developed a conditioned instinct for turning round and round a number of times before he settled down to sleep. Although many generations have passed since his ancestors got any advantage from this practice, the ordinary domestic dog to-day, when about to lie down on a carpet or a cushion, still carries out all these movements as practised by the wild dogs from which he is descended. A horse, to give another example, manifests a natural or inherited fear reaction when, for the first time, he sees a large dark object by the side of the road. It may be just a tar-barrel, or a

heap of stones. This reaction is even more actively provoked if an unfamiliar object moves towards the horse or follows after it. No doubt, the instinct was of great service to the horse's ancestors when they lived in a wild state. For an object such as that which still fills their descendants with alarm would, very likely, in those conditions, have turned out to be a beast of prey, from which the horse's only hope of escape would consist in promptly shying away from it and bolting. People who train young horses try to familiarize them with objects of this kind, so that gradually they learn that such things do no harm. But if, by some misfortune, the horse, whilst under training, comes into contact with one of these moving objects, such, for instance, as a motor-car, it is very difficult—often quite impossible—to drive out of its mind the association of a motor-car with the instinctive reaction of taking fright and bolting. Such modifying associations need not be disagreeable or painful ones. A cat or a dog soon gets to have a pleasant and friendly feeling towards the person who habitually feeds or pets it; and many animals can be trained to do all sorts of tricks, and to like doing them, because their performance has been again and again associated with the gratification of some appetite, with its natural accompaniment of pleasure. This is what animal-trainers mean when they tell you that some creature whom they have taught to perform an elaborate trick has been educated entirely by kindness. Many examples of instinctive acts inappropriate to the new circumstances of civilization or, in the case of animals, of domestication, will occur

to you. You must often have seen a dog, when a motor-car passes, rush out to it and run dangerously along beside it, barking as it runs. No action could be more useless to the animal, or more annoying to its friends. When, however, we recall the fact that the ancestors of the domestic dog hunted in packs, just as wolves do, we understand how this instinct arose, and what a useful instinct it once was. Chasing some creature bigger than itself, some member of the pack faster than the rest would come alongside the hunted animal. It would then be a matter of urgency to speed up its fellows so that they might arrive at the final scene in time to ensure success. The motor-car is such a novelty that the reaction which it provokes in animals with relatively simple minds is likely to be strikingly out of place.

There is in all this a lesson for ourselves. It is only when we look back to very early times and reconstruct in imagination the conditions of life of our wild ancestors, hundreds of thousands of years ago, that we can find a satisfactory explanation of many of the eccentric and often stupid and seemingly wicked acts which people are always committing—the writer and the readers of this book being no exceptions.

Here is an illustration of an instinctive tendency to which I have already referred. In primitive conditions, before man learnt the arts of domesticating wild animals and of cultivating the soil, he had to wander far and wide in order to collect his food and to satisfy most of his other wants. Therefore it was very helpful, indeed essential, that he should have an instinct to wander or travel.

Few of us, nowadays, have occasion to journey for miles over moors or through forests in order to collect something for our supper. Instead, we 'phone up the butcher, or run round to the shop at the corner, or go into the garden, and obtain without much effort or trouble all we need. Civilization consists very largely in our having thus arranged material things around us, instead of having to go and find them each time we want them. It is no longer necessary for most of us to go far from our homes and from our families in order to get something to eat and something to wear; but the old instinct remains in us. In some it has become very weak through disuse, but in others it is nearly as strong as ever; and so we find people with thousands of pounds in the bank, with large comfortable houses to live in, and with lots of people to wait on them and fetch them everything they fancy, who yet are subject to periodic fits of restlessness which drive them to go out for long walks or rides, or even farther afield into unexplored countries where they will experience every sort of physical hardship and discomfort, away from their friends and from all the pleasant things that civilization has given them. Such people are as much impelled by inherited forces, quite unrelated to present-day circumstances, as are the dog who barks at the motor-car and the horse that shies at the tar-barrel.

Here I must introduce to you a phenomenon, or happening, which will throw a light on many of our acts, the motives of which might otherwise be obscure. I have told you that, without our willing it, the sight or smell of attractive food often sets

our digestive juices flowing. Scientists have performed a number of careful and very interesting experiments in order to find out more about the possibilities of this sort of reflex action. These experiments and observations have mostly been made on dogs; and they have yielded some very curious results. After repeatedly ringing a bell shortly before giving the dog his dinner, it was found that the mere ringing of the bell, even if no dinner followed, caused the digestive glands of the dog to pour out their secretion, exactly as they originally did when the piece of meat came into view. Now, if we did not know of these experiments, and of this built-up association of the sound of the bell with the coming of the dog's dinner, we should be puzzled when we found that ringing a bell set a dog's stomach digesting—or, rather, preparing to digest. This reaction to a substituted stimulus mentally connected by association with the original or natural stimulus is called a conditioned reflex. It would be possible to find hundreds of examples of such conditioned reflexes among the more highly developed members of the animal kingdom, and a very large number of human acts can be accounted for in this way. In reflexes of this kind, though the emotions may be involved, the conscious will plays little part. The dog, for instance, does not even know that his stomach glands are secreting, that is manufacturing, digestive juices; much less did he consciously will them to do so.

You will see that if an instinctive act is essentially but a chain of reflexes, it also may be conditioned; that is to say, the response to a situation

may be changed at any point in its sequence. In man, the first link in the chain of reflexes which make up the hunting instinct, for example, is the impulse to wander over fresh ground. This is well illustrated by the seemingly aimless wandering of the Jews in the Whitechapel Road towards the end of the Day of Atonement fast, when the urge of hunger is becoming clamant. We may condition the next stage of the instinct (that is, the next reflex) by associating its stimulus with some new interest, such as the taking of a photograph, or with the collecting of butterflies or birds' eggs, or even with the subtler appreciation of poetry, which thenceforth may divert us from the series of activities which in primitive man went on to the slaughter and eating of some edible animal. That is to say, where one link joins another, anywhere in the course of the chain, a fresh associated stimulus can be substituted for the natural one.

I know how very difficult and confusing all this talk about 'conditions' and 'reflexes' must seem to you; so do not spend too much time over it at the first reading. When you have read the whole book, turn back and look at this bit again. I wish I could explain it more simply.

Men and all the so-called higher animals—and for all I know, all animals however lowly—start life with another piece of mental equipment over and above the tendencies to reflex and instinctive action. This is known as appetite. The chief primary appetites of man are for food, for drink, and for union with a member of the opposite sex. I have not included in this list our appetite for air

to breathe, because ordinarily that does not enter into our consciousness at all, and if we are deprived of it for but a very short time we die. Everyone, however, is frequently conscious—and our ancestors were still more urgently conscious—of a craving for food and drink. These two appetites show themselves very soon after birth; but the sex appetite, although it is born in us, does not show itself until we are much older, and are capable of being fathers or mothers. But, whilst these are universal, and probably our most important, inborn appetites, they are far from being our only ones. We all have in varying degrees an appetite for the company of our kind. Many other animals share this with us. You have probably watched cows, or horses, or dogs, when they sight another cow or horse or dog, stop whatever they are doing and run off to join the other, even though he be a complete stranger. We do not, of course, know directly what any other animal—or, for that matter, any other person—really feels like; but most of us who have ever been condemned to be much by ourselves must know the feeling of loneliness—which really is as much an indication of unsatisfied appetite as are hunger and thirst. Another appetite, which seems to be universal, may be called the desire for mastery or self-assertion—a desire which, when exaggerated, becomes (like most other exaggerated appetites) what we call a vice or a sin: in this case, the sin of pride. The satisfaction of our appetite for mastery need not, however, be at the expense of other people; it can be as readily satisfied by gaining power over material things and

material circumstances. Stupid and unimaginative children sometimes satisfy this appetite by bullying boys or girls who are weaker than themselves; whilst vulgar men and women are apt to insult or meanly exploit other men and women who happen, through poverty or some other circumstance, to be dependent on them. People with finer spirit satisfy their appetite for mastery by painting beautiful pictures, or by excelling in some sport or branch of athletics, or by rendering some outstanding service to their countrymen or neighbours. We have other important appetites, less clearly defined, such as that for harmony or unity; but those I have enumerated will serve for our present purpose.

All our instinctive trends lead towards the gratification of appetites. This does not mean that the animal or the child or the man, who is impelled to act in a certain way because of an instinctive urge, is consciously seeking the satisfaction of a primitive appetite. Very often, indeed, activities essentially instinctive have no present relation to the gratification of the appetite to which the original instinct ministered. Caged birds who have not had, and will not have, any opportunity of mating and producing young, instinctively build nests in the spring, and make all sorts of preparations for the rearing of a family. Squirrels in captivity, although they have their food brought to them daily all the year round, instinctively hide a store of nuts in the autumn, just as though they were up against all the difficulties of a natural life. Millionaires who have only to send to the stores for anything they want, whenever they want it, make elaborate collec-

tions, and store them in their rooms, just as might a prudent cave-dweller who was never sure of tomorrow's dinner. The instinct is, as it were, followed for its own sake, the inclination being aided by the pleasurable feelings which themselves form part of the urge. A good many simple-minded people, for instance, still hunt and kill animals, and get an enormous amount of satisfaction and enjoyment out of it; not because they want food, and not because they get any pleasure out of killing animals, but because hunting constituted one link in an instinctive chain which helped primitive man to appease his hunger.

All animals seem, so far as they can be observed by us, to be built on a common plan, and to react to the external world fundamentally much in the same manner; even though, in detail, their behaviour is so various. We have small ground for supposing that the ultimate forces which impel our own activity differ in essence, however much they may differ in quality or strength, from those which move our lowlier relatives. It is the great discovery of the so-called New Psychology that our own true motives of action are rarely what we flatter ourselves they are. We have been so used to take for granted that whilst other creatures act mainly from instinct almost as iron filings fly to the magnet, we are 'rational creatures' guided solely by conscious reasoning and calculated foresight. We are now coming to see that we also depend on inborn energy and impulses for our driving force, and that our reasoning is but a development of that conscious hesitation and delay

which all animals manifest in varying measure. There is, perhaps, some danger in taking it for granted that, when another creature, or even another person, acts a little as we might act in the same circumstances, it is driven by the same motives, and has thoughts and feelings like those which would urge us, those which we should experience; but there is an even greater danger in assuming the opposite. As I have said, we cannot possibly know anything about a mind other than our own except by observing how its possessor behaves; and, seeing how closely related we are to the whole of animal creation, it is but reasonable to expect, unless we have evidence to the contrary, that, when two animals respond similarly to the same problem or situation, their feelings and thoughts are similar also. Conventional folks who talk about animals acting through instinct, whilst claiming that man, even when apparently behaving in like manner, is a superior being governed only by reason, are really not seeking truth, but trying to keep their ends up, or trying to defend some of their favourite habits and pastimes. Once we admit that animals are but simpler editions of ourselves, it is difficult to combine an easy conscience with the enjoyment of such sports as hunting, or such self-indulgences as eating the flesh of our poor relations.

# CHAPTER III

## APPETITES AND INSTINCTS

We are now in a position to define, or rather to explain in a little more detail, the true significance of some terms, such as instinct, appetite, and vital energy, which we have already had to use in the course of our general description of the workings of the mind. As I have said several times already, we do not start life with a clean slate. We have, for one thing, a ready-made power of movement, and a ready-made urge or inclination to exercise it. We start with a sort of give-and-take attitude towards the world outside ourselves. This rather vague power and inclination make up what I have called vital energy or Life-force. Then, again, we have, born in us, appetites which I have already named—appetites which we seek to gratify, urged and reinforced by the feeling-states known as pleasure or comfort, and pain or discomfort. An unsatisfied appetite makes us feel uncomfortable, whilst its satisfaction changes the feeling-tone into one of comfort. This capacity for distinguishing between comfort and discomfort is, then, another part of the equipment with which we start life.

Throughout our lives, the avoidance of discomfort and the seeking of comfort or happiness (as in its more highly developed forms we call it)

strengthen our *conscious* motives of action. Nature, however, fortunately for us, does not leave us dependent for guidance on motives of which we are fully conscious. She starts us off with certain general inclinations which determine the main lines that we can but follow, whether we are aware of them or not. There is always a danger of creating wrong impressions when we compare mental events with external events, or with tangible objects. Yet, I do not see how I am going to get you to follow my explanations and descriptions if I do not take this risk. Perhaps my best plan is to tell you how I picture or symbolize these things myself. I imagine, then, that we are furnished from birth with certain mental channels (high roads or railway-lines would serve as symbols just as well) inherited from our ancestors, and that it is along these that our vital energy naturally tends to run. These channels symbolize our instinctive tendencies. In some animals, such as the bees, the inborn channels are elaborated so as to guide almost every action of their lives, including all those activities necessary for their individual preservation and for the maintenance of their race in the conditions which they normally encounter. Such animals behave in a very uniform manner, varying hardly at all from generation to generation. Bees to-day seem to conduct their lives almost exactly as did their ancestors hundreds of thousands of years ago. Our instinctive tendencies are not so detailed as those of the bee, but are more capable of being modified or changed in their course under the influence of experience and teaching. To revert

to our simile, whilst we cannot alter or abolish the mouths or openings of the big channels into which our vital energy automatically flows, we can dig side-channels in our minds into which a large part of this energy may be diverted from the main streams. We must not, however, suppose that each of our instinctive tendencies is itself a sort of engine, with its own special supply of power, for which an outlet or means of expression must be found along its own lines. It is much safer, and much more likely to lead to true notions, for us to think of our instinctive tendencies as corresponding with ready-made channels and of our mental energy as a general supply, not parcelled out in fixed proportions to the several channels which it feeds.

Nearly all modern writers on psychology are agreed as to the very important part which inherited tendencies play in our lives and in our activities. Some, indeed, go to the length of assuming that, unless our vital energy is allowed to flow unchecked along the channels existent at birth, there is bound to be trouble, and our mental health is bound to go wrong. But there is little reason for supposing that any of our instinctive tendencies are of this rigid character. Our appetites, directly related as they are to our fundamental bodily needs, have this quality of unchangeableness; but our instincts are merely specialized ways of satisfying those appetites. As we gather experience, we often find better ways of attaining the same result. Instinctive tendencies modified in this manner are called habits.

This is a convenient point at which to introduce the reader to another of the fundamental facts of mental life. Such danger warnings as the occurrence of a sudden noise or the removal of support provoke, even in the youngest infant, instinctive responses accompanied by the emotion or feeling-tone which we call fear. If something else happens at the same time as one of these danger warnings, especially if it happens repeatedly in association with it, the emotion of fear can generally in future be provoked just as effectively by the occurrence of these coincidental happenings as by the natural stimulus itself; as the dogs of which I have told you in a previous chapter associated the ringing of a bell with the arrival of their dinner. Many of the seemingly 'unreasonable' fears which children and grown-up people experience can be accounted for in this way. I shall have more to say later on about the building up of associations. I want now to go back to the subject of instincts, and the important and useful part they play in our lives.

In higher animals, the life-preserving significance of instinctive response to danger is well illustrated by the rapid flight of a rabbit when it sees or hears a dog, or of a man when he sees something about to fall on him. This inclination to run away from a dangerous situation is one of our earliest and strongest tendencies. In us, and possibly in all other animals, it is accompanied by the emotion of fear. In some animals this fear-reaction may take other forms. Instead of running away, which might be useless if the danger were of attack by some animal even faster on its feet, the protective reaction

may take the form of concealment, or of absolute stillness. A rabbit, for instance, when it is aware of danger, sometimes lies perfectly motionless in the grass, and only when its hiding-place is recognized by its pursuer does it take to its heels and make for its burrow. Another way in which we may be impelled to react to danger is by fighting or overcoming it. This reaction is likely to occur whenever we are hindered from completing the instinctive action which we happen to be carrying on. A rat whose flight has been checked by some obstruction, such as a piece of wire-netting, will turn on its pursuer, no matter what their relative sizes or strength, and fight, if need be, to the death. This instinct of pugnacity is accompanied by an emotion with which we are all familiar—the emotion of anger. A milder response to situations with harmful possibilities is that of mere withdrawal. To the feeling-tone that accompanies this response we apply the term repulsion. Almost unconsciously, we either draw back from, or push away from us, anything that seems to us repulsive. Most people react in this manner to a caterpillar in the cabbage on their dinner-plate; and many persons feel much the same if a spider runs across their bed. You have only to watch a child to whom a dose of nasty-tasting medicine is being offered to see this instinct in full operation. But the world is full of objects which, at first sight, cannot by any animal be distinguished as harmful or desirable. Further investigation may throw more light, and so we are equipped with another instinct, that of drawing closer to an unfamiliar object, or to one

whose nature is not clear, and studying it in more detail. This impulse to investigate makes itself known to us by the emotional state called curiosity.

You will see how useful are all the instincts I have named—flight, concealment, pugnacity, withdrawal, and investigation—if an animal is to survive amid the many dangers with which Nature surrounds us all. With the possible exception of the last-named, all these reactions may be called defensive. We are, however, equipped with additional inborn tendencies which, although they also serve the great purposes of preserving our lives and securing the continuation of our kind, have a more personal or positive quality, adding as they do to the fullness of our lives and to the developing of an harmonious relation between ourselves and the general plan of the universe. These are the maternal, protective, or tender instinct, to which belongs the feeling-tone called pity; and the social or herd instinct, characterized by the emotional state known as sympathy.

The relatively equable emotional state which normally accompanies the simple, unchecked, instinctive response to a situation, becomes raised to a higher pitch—sometimes to a very painful one—if the fulfilment of the instinct meets with any serious obstruction, whether external or caused by some conflicting impulse within ourselves. Thus, slight fear may become panic; calm desire may be turned into frenzied passion, and annoyance into hatred; whilst even curiosity becomes intensified if the desired knowledge is withheld. 'I shan't tell you what's in my pocket', 'That's a secret', 'Guess

whom I saw this morning!' are common ways of heightening curiosity. The actual attainment of the final aim towards which instinctive efforts or chains of reflexes are directed usually ends both the instinctive impulse and the emotion which accompanies it.

I have just mentioned obstacles that may arise to the following of an instinctive course through the presence in the mind of some almost equally strong tendency in another direction. In a highly developed animal, notably in man, a novel or unusual situation generally provokes, in varying degrees of strength, more than one instinctive response. Commonly, one impulse is much stronger than the others, and there is little hesitation in obeying it. When, however, two or more response-tendencies are nearly equal in force, hesitation occurs, and we get the feeling that we have to exercise choice, and that we are free to choose whichever road we prefer. Fortunately for our peace of mind, the mere delay leads to a change in the relative strength of the two impulses. One or the other weakens or strengthens, and so our course becomes clear, and we have the impression that it is we who have 'made up our minds'. It would be truer to say that our mind is now made up.

Most of the instincts we have just been talking about contribute to the preservation of the individual life.

Any creature that took so gloomy a view of itself and of life that it had no inclination to eat or drink, or get out of harm's way, would quickly die and leave no descendants to inherit its lack of vitality.

But, although in fact every creature is born with a persistent impulse towards self-preservation, it seems to be part of the scheme of things that no one animal shall live more than a certain time, no matter how healthy it is or what care it takes of itself. Consequently, it is provided that all those species of animals—at any rate all except very lowly ones indeed—that have managed to survive are possessed of a further urge or inclination, the object of which is not the preservation of the individual itself, but of the species to which it belongs. I do not mean that it consciously aims at such a remote thing as the preservation of its race, but that it has an inclination towards certain lines of action which, in fact, bring about this result.

Insects and fishes and birds and quadrupeds, all have an instinctive tendency, the outcome of which is the creation of new individuals of the same kind. In some animals, and strikingly in man, this mating impulse, as it is called, is associated with a very high degree of pleasurable excitement; and as this pleasure is much greater if both the mates, the male and the female, are attracted each to the other, a very common tendency exists in Nature for animals, including ourselves, to be more smartly dressed and generally to show themselves off to better advantage, at those seasons when the instinct to mate is at its strongest. The plumage of birds, for instance, is then at its brightest and it is then that they sing their best.

This mating impulse is of itself not in all cases sufficient to ensure for an animal the perpetuation of its kind. Young creatures, when they are just

born and have had no experience of the world, are not, unless they have elaborate inborn instincts, well equipped for such urgent tasks as those of finding something to eat and of avoiding the many dangers that lie in wait for them. In some kinds of animal this difficulty is got over in what appears to us to be a very wasteful and a very cruel way.

These animals—fish and frogs are good examples of such—when they have mated and become fertilized by a male of their species, lay such an enormous number of eggs that it does not much matter if ninety-nine out of every hundred of their progeny are eaten up by some passing duck or fish of prey within a few hours of their being born. When we come to birds and to such creatures as mice and rabbits and horses and men, a better and more humane method of race-preservation becomes operative. These animals do not lay thousands of eggs, or bear litters running into hundreds. Many of them produce but one or two, and few of them more than a dozen, new individuals at a birth. Consequently, if the race is to be carried on, there is very little margin for wastage of infant life. And so we find in these kinds of animals, inborn in the females, and in a lesser degree in the males, an instinctive urge which is at its highest when the mammal gives birth to young, or the bird hatches out its fledglings or chickens. Then, straight away, appears a strong emotion, associated with an insistent impulse to succour and protect the foal, or the calf, or the baby, or whatever the new arrival may be. This is the so-called maternal impulse; an urge which is at the back of a lot of things that

we do and feel; things which have no direct connection with babies or motherhood.

Some species of animal—except at the mating season—live detached or solitary lives. Day after day, they 'walk by their wild lone', and have little desire for the society of their fellows. Other kinds, however, generally go about in herds or flocks; and when they are compelled to live alone for any length of time they are apt to feel lonely and miserable, or, at best, purposeless and inert. In the insect world, this herding tendency sometimes reaches such a pitch that the individual can hardly be said to exist. We cannot imagine a honey-bee existing alone for more than one or two miserable days, even in the best constructed hive in the world. Her every impulse and activity are what we may call patriotic. She is swallowed up in an unqualified enthusiasm for the common welfare. Apart from that, life seems to have for her no meaning or attraction. Social absorption never attains to this extreme in any bird or quadruped; but in some species it is very marked. Sheep and cattle and wolves and many kinds of birds are herd animals. In nature, they never live alone, but in groups of various sizes. Man also is, but in far less degree, possessed of this impulse towards living in groups; though, as he becomes more developed and acquires more individuality, he generally likes to be left a lot to himself, because he finds it difficult to share his peculiarities with other people. But he still dislikes complete detachment from his fellows; and, when he is with them, he cannot help—unless he is rather unhealthy in his mind—becoming in many ways

one with them, sharing his and their fears, hopes, and desires. When a mob gets out of hand and does all sorts of things that few of its individuals would think of doing if alone, we may be sure that the herd feeling has been actively stirred, and that such a wave of sympathy has passed through the crowd that only a few very strong-minded individuals have been able to keep their heads. This strange instinct and the emotions associated with it play so big a part in modern civilized life that I am going to devote a short chapter to them.

There are a few other instincts or tendencies which many people consider to be inborn ones, though other people regard them as arising out of some of those I have already named. One of these is the itch for acquiring and collecting things, apart from their immediate use. This practice would certainly be very useful to primitive man, who must often have been able, by a stroke of luck, to secure more food than he needed at the moment, the excess of which, if stored away, would come in handy in a time of scarcity. Some animals, especially those that hibernate or go to sleep during the winter, such as the squirrel and the dormouse, have this instinct or habit strongly developed. These creatures, every autumn, make a store of nuts and seeds, carefully hiding it away near their winter sleeping-place, so that when they wake up in the spring they may have something to eat all ready until fresh food is obtainable. Another impulse which we all in some degree possess is what has been called the constructive instinct—a tendency to put things together in such a way as to make something useful

or interesting other than the things which are to be found ready-made in nature. Birds have a very strong constructive instinct; so have beavers and many insects, such as bees and ants. It does not much matter whether we consider these as primary and inborn instincts, or as complex ones arising out of primary instincts—either combined together or modified in the light of experience. They undoubtedly exist in nearly every one of us.

I have said that most of the primary instincts which are born in us and are common to every human being, black or white, savage or civilized, are accompanied in their fulfilment by a characteristic emotion—fear, anger, pride, sympathy, pity, disgust, wonder, and so on; but, as we grow older and develop, we find that not all our emotional states have this simple character. How are we to account for these? What about admiration, envy, gratitude, scorn, and awe? Surely these are common enough experiences of nearly all of us. When we look into the matter, and try to find out how these emotions arose, and what are the instincts to which they correspond, we shall find that every one of them is a combination or complex of the simple emotions with which Nature furnishes us when we start on our journey through life. We shall find, moreover, that the tendencies to action which accompany these emotions are compounded of the instinctive motor-reactions which go with the emotions of which the complex one is made up. Thus, for example, the complex emotion of scorn is a blend of anger and excessive mastery-emotion or pride; whilst envy is compounded of

anger and that feeling of submissiveness which is part of the emotional accompaniment of the herd instinct. Admiration is obviously a combination of wonder and submissiveness; gratitude a mixture of submissiveness and tenderness—the emotion which characterizes the maternal instinct. Even more complicated are such emotions as awe, which is a blend of fear and admiration, the latter, as I have already said, being itself formed by the association of submissiveness with wonder.

We have now indicated the great driving-forces that lie behind the human will. They are not just conventions, or pieces of etiquette or good manners which we have learned. They are born in us, and we can no more repudiate them than we can repudiate our noses or our ears. We can make new routes along which these forces may more or less adequately spend themselves; and, of course, they are not all of the same strength or impulsiveness; whilst their relative strengths vary in different individuals. In some, the social instinct is particularly strong; in others, particularly weak. So with the self-preservative and the mating and the maternal (or protective) instincts. But, unless we have cultivated alternative habits which will afford scope for our fundamental desire for self-expression, it is along the lines of one of the basic instincts, whichever at the moment happens to be the strongest and the most easily exercised, that desire will find expression.

# CHAPTER IV

## THE SOCIAL INSTINCT

As I said in the last chapter, some animals, except at the mating season, or when they are rearing their young, lead solitary lives, having little more association with other members of their species than with animals unrelated to them. Others, however, have the habit of living in herds or communities of various sizes. Most of the beasts of prey belong to the former class; though some hunting animals, such as wolves, who often chase and kill creatures bigger and stronger than themselves, have the instinct to live in packs, thus increasing their power in overcoming their prey, who might easily be too much for any one of them alone. The impulse which binds these animals, such as wolves, into a co-operative group or pack is, as you already know, called the herd or social instinct. A familiar example of this instinct is afforded by a flock of sheep, who, in their wild state, find in numbers their only safeguard against the carnivorous animals who prey on them. Cattle also are herd animals; whilst among the insects, we find perhaps the most complete examples of this instinct in the beehive and the ant-hill. If you have ever seen a swarm of bees, it must have struck you that the individuality of most of the bees has

practically disappeared. They are, as it were, little more than separate parts or organs of a larger organism, the community or swarm. All appear to have one purpose and one inclination, so that even the universal instinct of self-preservation sinks into insignificance if it conflicts with the general interest of the swarm as a whole.

In a very interesting book, published just fifty years ago, Francis Galton reported some of his observations of the habits of wild animals, or rather of untrained animals, in the then almost unexplored parts of western South Africa. He paid special attention to the habits of the native oxen, which lived together in herds, not through affection for other individuals of their race—for he says that they showed, on the whole, more spite and disgust towards one another than forbearance or fondness. Nor did they seem to love society, as monkeys do, because it gave them an opportunity of leading a fuller life; for, even in the middle of the herd, each ox would continue self-absorbed, grazing or chewing the cud, taking no apparent interest in the similar doings of its neighbour. Yet these oxen could not bear to be separated, even for a few minutes, from the rest of the herd. They seemed attracted to it as a needle is drawn to a magnet. 'If one be separated from it', Galton wrote, 'by stratagem or force, he exhibits every sign of mental agony; he strives with all his might to get back again, and, when he succeeds, he plunges into its middle to bathe his whole body with the comfort of closest companionship.' This instinct, the writer goes on to tell us, is the cause of great in-

convenience to the traveller in ox-waggons, who constantly feels himself in a position towards his oxen 'like that of a host to a company of bashful gentlemen when he is trying to get them to move from the drawing-room to the dinner-table, and no one will go first'. Seeing that these herds, packs, and swarms do in fact move, it is obvious that some one or more of the individuals composing them must move away from the herd and make the start. In the elaborate organization of the bee-hive, we know that certain special bees are told off to go and discover fresh hiving places, and not until they return and lead the procession does the swarm move forward to its new home. It is probable that much the same thing exists in all herd movements. A few individuals stand out as leaders with an instinct for initiative and adventure. Men who break-in wild cattle for harness—for they are still used in many parts of the world as we use horses on our farms—look out for any individuals who show independence by walking ahead of the rest of the herd or by grazing apart from it, and specially train these fore-oxen, as they are called, to act as leaders to the rest. You will see how necessary it is to a herd of cattle or sheep that it should include some natural leader with a bold and independent spirit. If you think about it, you will realize something else not at first so obvious. Remembering how important it is for these comparatively defenceless animals to keep together in crowds, it would obviously be fatal if this instinct for independent action were general among them. In fact, the more inclined the ordinary member of the herd

is to follow the leader and to fit in with the movements of the rest, the better for all. If, in the wild state, with lions and tigers lying in wait, individual sheep or cattle were to think out a course for themselves and go off on their own, there would soon be an end of them. Thus, whilst enterprise and originality in the leader is helpful to the herd, these qualities would actually be a danger if more than a few possessed them. For the majority of these 'social' animals, submissiveness and imitativeness are the biggest virtues.

We humans also are herd animals; but animals so beside ourselves with pride and self-deception that it is hard for us to realize the true reasons why we act as we do, and what are the real explanations of our feelings. Only when we study the same problems in other animals can we be induced to adopt the unprejudiced attitude of true science. Yet, if we look into the matter, we shall find that a great many of the things we do every day of our lives are done, not because we have thought them out for ourselves and deliberately chosen them, not because we have had personal experience of them and found that they pleasantly fit in with our self-indulgent instincts, but because everybody in the group or set to which we belong does them. We may not consciously copy our neighbours; but there is nothing we most of us dislike more than to appear eccentric or unfashionable. Moreover, there are few people more generally unpopular than the individual who, without the other qualities of leadership, fails to fall in with the general sentiments and the general movements

of the community to which he belongs. Those who are old enough to remember the social atmosphere during the Great War which ended fifteen years ago will recall how very unpopular were those people who did not join in the popular abuse of the Germans, who were our chief opponents; although, in ordinary times, most of us know quite well that average human nature in Germany is much like it is everywhere else. Society and the world of politics are full of this sort of herd sentiment and herd impulse. Good form and loyalty to one's class or one's party is felt to be the final guide to conduct; and it is easy to understand how useful was this instinctive tendency to think and act like other people to our barbarian ancestors, whose tribal groups were in much the same position as that of the packs and herds of animals we have been talking about. 'Follow your leader' was the best policy, and any display of independence amounted to a sort of treachery. This herd instinct is no longer so essential in the circumstances of civilization; yet it has survived to such a degree as to constitute a serious obstacle in the path of our further progress. It is both surprising and lamentable that many otherwise intelligent people of all ages blindly follow the teachings of anyone with sufficient persuasive power to pass himself off as a natural leader. He may be a journalist or a fluent speaker, or merely a very rich man with ambition to lead; but the last quality he needs in order to attract a following is a clear and honest mind.

This, however, is to look but on one side of the

part which the herd instinct plays in human life. Fortunately, there is another side, an even more important one, and a much more pleasant one. The bond which keeps a primitive herd together is characterized by two emotional accompaniments. In addition to the negative abeyance of the emotions that go with self-assertion and self-realization, there is a positive emotional state which, in its developed form, is called sympathy, or entering into the feelings of others. Most of us cannot come face to face with pain or trouble or joy, even though it may not directly involve our own interests or well-being, without to some extent sharing in it. To the social instinct and to the emotion of sympathy, tempered or modified by the protective urge that characterizes the maternal instinct, may be traced nearly all those altruistic and self-sacrificing deeds that we spontaneously recognize as among the finest and noblest achievements of humanity.

The other characteristics for which our inheritance of the herd instinct is responsible are due to its second mental accompaniment, suggestibility. We are all, in varying degrees, much influenced, often without our knowledge, by the thoughts, acts, and speech of the people with whom we are in contact. This has nothing to do with logic or reasoning—indeed, argument does not enter into the matter; nor is it a direct outcome of sympathy. The so-called opinions of the great majority of men and women, as also of boys and girls at school, are largely determined by suggestibility. Half the beliefs we have, and half the dogmatic things we say, supposing them to be the result of our own ex-

perience and reflection, are, in reality, little more than mimicry. We are actually infected with the prevailing sentiment, almost as we catch diphtheria or smallpox when we come into contact with people suffering from those diseases. It would otherwise be very hard to explain why the children of Christians nearly always are Christians, whilst the children of Mahommedans, with minds similarly constituted, turn out to be Mahommedans. The reasoning faculties of these two groups of children can hardly be so uniformly different as these results would suggest. You can understand how valuable to herd animals, living in constant danger, this susceptibility to the influence of leadership must be. Under the influence of suggestibility our critical faculty becomes suppressed, so that we are at liberty to accept without question the opinion prevalent in the group of which we are members—that is, generally, the opinion of the leader whom the group has accepted as such.

How comes it, you may ask, that some one individual stands out from the rest, and, instead of waiting for a lead from others, himself assumes a more or less independent position? And how comes it that the rest of his fellows, instead of resenting his independence, are filled with admiration, amounting often to servility? Even among animals these phenomena occur, as is illustrated by the story I quoted about the wild cattle in South Africa. It would seem that the cosmic schemer often called Nature has provided for the occurrence, in all species of animals who live in groups, of a small number of individuals in whom the impulse

towards self-assertion and mastery, together with that towards enterprise and adventure, outweigh the impulse driving them to do and think what everybody else is doing and thinking. Such individuals, if in addition they possess at least average intellectual capacity, are born leaders. Nature, however, is often unnecessarily lavish in her administration; and, especially in societies that have departed far from simple and primitive ways of life, she is apt to supply a larger number of would-be leaders than the society or the group has need of. Such excess is comparable to that of drones in a beehive, only one of whom is needed to fertilize the queen, the rest being slaughtered as soon as she has made her choice. We do not slaughter our unwanted leaders; but we do our best to outlaw them, branding them as eccentrics, faddists, or social menaces. Among these rejected ones are men and women of outstanding ability and generous character, who, however, have to wait for later generations to give them their meed of admiration and respect. Their ideas and their ideals are too far removed from those of the contemporary herd to gain adherence in their own day. The majority of would-be leaders, however, have no such outstanding qualifications. They are often individuals possessed of an exaggerated egoism which prevents them from accepting a position of mere equality with their neighbours, and stirs up in their minds a feeling of jealousy and rivalry towards those whom their fellows have accepted for admiration.

# CHAPTER V

## BEHIND THE SCENES

I HAVE said how difficult it is to obtain first-hand facts with which we can build a reliable science of the mind. The only mind which we can observe at first-hand is our own. What goes on in other people's minds we have to infer from our observation of their behaviour. But we must not fall into the error of supposing that mental activity always manifests itself in observable behaviour. Behaviour obvious to other people is only one part of an act. Our thinking and our feeling go on behind the scenes, and need never be made public unless we choose to talk about them. If you could see me at this minute, you could form a clear enough idea of the general trend of my mind, and of what it is I am thinking.

You would see me sitting in a chair, facing a friend with a typewriter on her knee. If you watched my face, you would probably notice a look characteristic of people who are concentrating on the matter in hand—sticking to a line of thought much as a dog keeps to the trail of a rabbit, avoiding all distractions or side interests. At frequent intervals you would hear me dictate the very words you are now reading. It would be obvious to you that I am trying to think out a way of

telling you how your mind works and expresses itself.

But, if you had come into this room half an hour ago, you would have had more difficulty in correctly interpreting what was in my mind. You would have seen me sitting in the same chair as that which I now occupy, and on the floor beside me a basin of cold water, together with a bowl of potatoes which I was busily peeling, as my contribution towards this evening's dinner. The expression on my face would have told you very little. By observing the movements of my hands, you would have been able to infer that some of my consciousness was concerned with the economical peeling of potatoes, and with the avoidance of cutting my fingers in the process. But if you judged that this was all, or nearly all, that I was thinking about and experiencing, you would have come to a very mistaken conclusion.

As I recall it, in or from my memory, my sequence of thoughts was something like this. A picture of my digging of these potatoes and of the plot of ground in which they had grown moved across my screen of consciousness. I seemed to see again the colour and the texture of the soil, and I judged its fitness for the roses already ordered from the nurseryman. Some anxiety as to whether I should be able to complete certain literary work, including the writing of this book, before the roses arrived next occupied the centre of my attention. A little lightning calculation reassured me on this point, and my anxiety changed to contentment. I saw myself planting these roses, distributing their roots,

and pressing the soil firmly about them, and, in rapid succession, I visualized the bursting of the first leaf-buds and of the specimen flowers of next summer, followed by imaginary harvests of flowers in succeeding years. Then a slight jar or blockage occurred, and I saw in my mind the invoice which I this morning received from the nursery. Doubt and anxiety again swept over me. Could I really afford this extravagance? Although at the moment I had enough money standing to my credit, was I sure that in six months' time I should not need every penny of it to meet more urgent claims? Then I realized the impossibility of foretelling the future; and, being in a healthy and optimistic state of mind, I recalled the numerous occasions on which pleasure-sacrificing abstinence had in the light of future events proved to have been unnecessary and wasteful. I argued with myself that I should at least have the roses, and all the beauty which they imply; and I wandered off into abstract philosophizing about the brevity of life and its few certainties and absolutes—its loves and its beauties. I speculated that the courage which all humanity admires and envies is but a quick realization of the priceless value of these certainties. And then I saw that my potatoes were all peeled; and I realized the necessity for prompt adjustment to fresh practical action if our dinner were to be served to time.

During that short period of five minutes as measured by the clock, my mind had travelled through seasons, if not indeed through eternity; and over space which no chain could measure. The

only external stimulant of it all was the bowl of potatoes at my feet.

And yet, in the whole of that day-dream, not a picture showed itself that was not a memory of previous sensory impressions and of my reactions to them; though, doubtless, many of them had been taken to bits and rearranged in accordance with some constructive predisposition born in me. I had been rehearsing or acting a play behind the scenes. Thinking and doing are not really very different things.

For the 'facts' which form the basis of our thinking are at bottom merely the impressions made on one or other of our senses, or rather the interpretation which our mind puts on those sensations. We cannot be said to know anything directly, unless it be our own existence. What, for example, we call the look of anything is a mental impression or interpretation caused by a whole series of happenings. We have at the back of the eye a very sensitive photographic plate which, when it is acted on by vibrations in the ether about us, is stimulated or irritated in varying degrees according to the size and frequency of these vibrations. Connected with this sensitive plate or retina are a number of nerve-fibres, which act rather like telegraph-wires, leading from the retina to a specialized part of the brain where further stimulation of nerve-cells takes place; and we become conscious of a composite impression of light and colours. From previous experience of similar impressions, usually combined with impressions made on our other senses, such as touch, we decide that there is in front of us an

orange, or a table, or a lamp, or whatever it may be. If, however, in imagination we took away from these things their colour, their shape, their hardness, their smell, and their taste, there would be nothing left which we could directly perceive—certainly nothing that we should think of calling an orange, or a lamp, or a table. The important thing to note is that all these qualities, yellowness, roundness, hardness, and the rest, are not strictly parts of the things themselves, independent altogether of our observing them, but are the reactions of our mind to stimuli that might provoke very different interpretations in other sorts of minds. So that, in a very real sense, man may be said to make his own world, but he is so constructed that he could not make any other sort of world.

We must get out of the way of thinking of the mind as something stationary and passive, capable of receiving and storing impressions in the sense that a cupboard is capable of receiving and storing pots of jam. As I have said, the sensations and emotions which we experience do not really come from outside us, though they may be provoked by outside things. They are, however, actual manifestations or experiences of the mind itself. Nor must it be thought that it is only after experience of consequences that we are attracted to, or interested in, certain things; and repelled by, or uninterested in, other things. We are born with a whole lot of tendencies and inclinations, and when there is some difficulty or obstacle in the way of the fulfilment of these natural inclinations, our consciousness becomes more vivid.

As the time approaches for one of our customary meals, we at first, if we are in really good health, vaguely experience a mild and not unpleasing feeling, which, if the meal does not quickly materialize, steadily increases in intensity until mealtime arrives. In other words, we grow increasingly hungry and, coincidently, our consciousness of hunger also increases. If, for any reason, the dinner, or whatever the meal may be, is delayed, our hunger may reach the level of discomfort, and so completely may it monopolize our conscious attention that we are unable to bring our mind to bear on anything else. Had suitable food been available when our urge to eat first began to show itself, the whole business would probably never have occupied the centre of our consciousness at all. It is much the same with all our other emotions and thoughts. We have several proverbs based on experience of this fact: 'Absence makes the heart grow fonder', 'Distance lends enchantment to the view', and so on.

Writers on psychology have caused a lot of false thinking by speaking of the mind as though it were composed of a number of distinct parts or faculties, built one on top of another, and acting almost as if they were separate and unrelated. But these faculties, such as feeling, willing, and knowing, are all woven together, and are to be found, though in varying proportions, in every act of our minds and in every deed we do. At the same time, as often happens in science, it is convenient and helpful to consider separately the different aspects of a thing; though we must be careful not to suppose—a

even scientists are sometimes led to do—that this artificial separation corresponds with the real facts. With this caution before us, then, we may try to analyse some of our simplest mental processes. As I have already explained, our only experience of the outside world is derived from the impressions made on our senses, as interpreted by our mind. We have no means of knowing what is the ultimate nature of things. All we know is how things affect us, or how we react to them. Certain vibrations fall on our eyes, and we 'see'; other vibrations fall on our ears, and we 'hear'; and so on. The actual sensations are in ourselves. As a rule, however, it is not mere sensations we are conscious of, but collections or complexes of sensations which we attribute to what we call objects. We do not see 'green', but a green something—a leaf, or a book, or other object—, and an object stimulates not one of our senses only, but several. Not only our eyes, but also our fingers, are sensitive to the stimuli of a book or a leaf. Not only our ears, but also our eyes and our hands, receive impressions from a ticking clock. Even a very young baby reacts to these impressions; and, very quickly, those that occur frequently together become associated in its mind. The next time a leaf is seen, the feel of it also comes into consciousness, even though the hands may not touch it; and the sound of the clock, even in the next room, will recall the visual impression that previously accompanied it. In the language of psychology, we 'perceive' the leaf, or the clock, as an object. Before we can clearly perceive an object, we must have had previ-

ous experience of it, or of objects similar to it. Even so simple a mental process as perception involves memory and comparison or judgement.

It is difficult to say whether an infant's first consciousness of an object is of a number of almost separate sensations—its look, its sound, its smell, and so on—or whether he first realizes the object as a whole, and only later distinguishes between the several impressions which it makes through the different senses. The difficulty of deciding this is increased by the fact that the infant has, as yet, no words wherewith to symbolize his impressions. Actually, when words come, it is 'nice orange', rather than 'nice yellow' or 'nice smell', that he usually first learns to say—though we do not know to what extent his teachers are responsible for this preference. Therefore we do not know whether it is more correct for a psychologist to speak of a percept as a combination of sensations, or to speak of a sensation as one of the bits into which a percept can be divided. Probably the latter is the truer.

When we are a little older, we have but to look at such a thing as an orange, for instance, for all the associated impressions to be attributed to it—its toughness, its smell, and its taste. These, together with its colour and its shape which we directly see, make up our mental picture or percept of the orange. After a certain amount of experience, we need to get but one sensory impression of an object in order, by a process of 'conditioning', to bring before our minds a complete set of the qualities of the object contemplated. As a

consequence of this association of impressions, we often say that the road looks slippery, or that the fruit doesn't look ripe, or that a man sounds angry, or that the bacon smells delicious; although these several qualities are not directly recognizable by sight or smell. All we really mean is that certain sensations have in our experience frequently been found in close association. This faculty sometimes lands us in difficulties, especially if our instinctive reactions are of a 'general', or undiscriminating, kind. Fowls show an instinctive fear reaction to the shadow cast by a hawk hovering over them; but they manifest nearly the same degree of alarm if some harmless object such as an umbrella suddenly appears between them and the sky. Lots of our prejudices in matters of diet are based on parallel similarities of look or shape. We often say that something which in fact is quite wholesome, and often delicious to the palate, looks poisonous or unappetising, because of its resemblance to some object which actually has these qualities.

Perception, it must be recognized, is not cold and colourless. It is tinged with feeling, and with that active personal inclination which is called willing. A baby's hands, as well as its eyes, move towards, or away from, everything it perceives—everything that stirs its interest. It does so because it has a natural inborn tendency to do so, a tendency which is not the fruit of experience or the result of reasoning; but just a part of human nature, something that we have to take for granted.

Some animals have far fewer distinctive senses than we have; consequently, their perception is

also simpler, and their ways of reacting to stimuli are much fewer. Some are so elementary that all they have a natural inclination to do is to move towards that which their race has found desirable—which generally takes the form of something to eat—and away from things which their race has found injurious. These creatures have but small power of adapting themselves to new circumstances, and therefore their nature changes but little from generation to generation. Progress in the animal world depends almost entirely on the development of new forms of sensation, and of more varied responses to the outside world, with correspondingly increased stores of experience. Even in the simplest animals, however, perception involves the active co-operation of rudimentary emotion and will. There is no such thing as a strictly impersonal attitude. We cannot think of anything unless, somewhere or somehow, we feel it as having to do—in fact or in imagination—with ourselves. This is most plainly, and most crudely, shown in a child's perception of objects; its interest is not in the intrinsic nature of such a thing as a chair, but in its purpose—what it is good for. At first, the baby, whose most urgent need from the outside world is nourishment, is inclined to test the possible utility of objects within its reach by putting them into its mouth. Later, other and more subtle forms of utility become known to it; as, for instance, capacity for making agreeable sounds—the purpose for which a baby generally uses the spoon given it to eat with. Conscious knowledge or cognition of an object or of a situation, then, never occurs without

some personal feeling and some personal impulse relative to it. The cognition ingredient is generally proportionate to the difficulty or novelty of the situation of the object; and the intensity of our consciousness is proportionate to cognition. In the ordinary way, when we perceive an object which is directly before us, we merely attach a meaning to it by completing our picture of its qualities in so far as they momentarily interest us. But man has a capacity that is so little evident in any other animal —except, possibly, in those nearly related to him —that it can hardly be said to exist in them. To this capacity, or faculty, the name of conception has been given. I perceive, for instance, this perambulator, this cart which the farmer drives to market, my friend's motor-car, and this omnibus offering to take me from London to Portsmouth. Out of those percepts my mind is able to form an abstraction, a general notion of 'a vehicle', of something in which people can ride from one place to another—not specially a motor-car, or a carriage, or a perambulator, but something intangible, which yet includes those essentials which are common to all these conveyances and to other conveyances yet to be invented. This creation of our mind is called a concept; and concepts form the basis of nearly all abstract thought and abstract reasoning. In forming a concept, we dismiss from our minds nearly all those impressions (not sensations only) made by individual objects at the moment of perception; retaining only those characteristics which, we may assume, have human relevance, independent of time or occasion. In this way, we form such

concepts as those of a book, a table, and a pen—each concept being a composite of the impressions made by *every* book, or table, or pen; those impressions which are peculiar to this or that book, table, or pen, being left out of the picture. The forming of concepts is of great help to us in thinking about, and in dealing with, the many situations with which we are all confronted. Thus, feeling thirsty, I glance at the dresser and see in an accustomed position an object, of a certain shape and size, which, from experience, I know to be the sort of object that is made to hold liquid. The hardness, the colour, and the design do not at the moment interest me, and, in consequence, intrude themselves on my attention no further than is represented by the fringe of my screen of consciousness.

Concepts enable us to classify objects, and to develop our discriminating powers. We get into the way of recognizing fine differences between things, and so of avoiding many of the mistakes to which unthinking persons so readily fall victim. When we say that a person has exercised judgement, we imply that he has accurately classified the relevant facts—that is, that he has brought them all under their proper concepts. The whole process of what is called reasoning consists essentially in a series of judgements, the facts arrived at by one judgement serving as the basis of the next.

# CHAPTER VI

## MEMORY AND DREAMS

One day last June my eye was caught by a group of harebells flowering on a grassy bank. Instantly I saw in my imagination a steep cliff near a Staffordshire railway station; and this vision was immediately followed by a hurried film of the life and activities and people of the little town adjacent. None of these things I had actually seen for nearly forty years. I had not consciously remembered them for decades. Yet, stored somewhere within me, were these memories, these once-living pictures. Clearly, therefore, those activities of the mind of which we are at any moment aware are but a part of our mental life. All of us have capacious store-houses packed with records of past experiences such as I have quoted. For years these memories may never enter the field of our awareness; and then, one day, the fragrance of some flower, or some unusual expression on the face of a passer-by, or an accent or tone of voice, or some chance word spoken, brings into the very centre of consciousness pictures sometimes of the highest complexity, echoing with minutest detail some experience which for five or ten years, or even for the best part of a lifetime, has lain hidden and undisturbed in the very depths of our mind. But because we have not

been aware of them, have not recalled them, or had them recalled, to our consciousness, it must not be supposed that they have necessarily lain dormant. Probably every experience of our lives which has, even for a moment, arrested our attention or stirred our emotions has, henceforth, entered into and become a part of the motive forces of our thoughts and actions. It is impossible to have an emotional experience, especially if it be combined with ever so slight a degree of conscious intellectual activity, without some permanent change in our character and in the balance of our impulses.

These memories of past experiences are liable to be revived in consciousness by any chance sensory impression which, as it were, draws aside the curtain between the illumined screen of immediate attention and the unillumined restless background. Our sense of smell, in particular, has potency in bringing into our 'mind's eye' complete pictures of scenes which we had hitherto 'forgotten'.

A short while ago, when shopping in the gardening department of a large store, I suddenly became aware that, instead of thinking of the matter in hand—namely, the purchase of some kind of tying material for large plants in my garden—, I was dreaming of a remote little harbour town and its quay-side, where I once spent a week's holiday as a boy. The picture was complete to the smallest detail—the little houses nestling on the steep hill-side; the pearly, rather flat look of the sea in the morning light; the masts of the boats swaying slightly against the sky; coils of rope lying about; seagulls flapping and swooping in great circles

overhead. I even seemed to hear their squawking cries above the shouts of the fishermen, together with the noises of the grinding and clanking of winches, and all the other sounds of a busy little fishing town.

The voice of the salesman brought my mind suddenly out of this delightful day-dream. He was saying that he could thoroughly recommend the ball of tarred string which he was showing me, as being suitable to my purpose.

Here was the clue to the picture in my mind. That smell of tarred string! How well I knew it as it came from the rope that hung about the little harbour which had been my playground all those years ago!

It is probable that every animal, certainly every animal that can learn by experience, has some faculty of memory. In no other animal, however, is this power of memory developed to anything like the extent that it is in man; and this difference of degree is even more marked when we consider our further faculty which enables us to cut up the memory pictures into parts, and then, combining selected parts with others, to construct an entirely new pictured event such as, in its entirety, we have never directly encountered in real life. The artist exploits this faculty in his creative work, but the process is not peculiar to the artist; it is common to us all. Our fancies, our sleeping dreams, and our day-dreams, are built up in this way, usually through no conscious determination on our part. Imagining is just another part of human nature.

In recent years there has been a striking revival

of the old fashion of dream-interpretation, and the majority of modern psychologists believe that, by studying and analysing his dreams, they can discover a great deal about a man's character and about his real wishes and inclinations, even of those of which he himself had not the slightest knowledge or suspicion.

So far as my own experience goes, I cannot trace any but the most obvious connection between my dreams, even when their images are regarded as symbols, and my character or real desires. In the first place, both the substance and the emotional tone of my dreams vary from night to night. One night I may dream that I am at a party, and suddenly discover that I have no collar on, or even that I have no clothes on—to the modern dream-interpreters a very significant picture; on the next night I may dream of myself contemplating and enjoying a lovely bed of primroses; on another night my dreams may be compact of money worries and of bank balances. I, like most other people, have a very wide range of interests. I am fond of flowers; I am sometimes anxious about my bank-balance; and, occasionally, though not very often, I am self-conscious about my clothes. All sorts of stimuli might, by association, bring any one of these into the field of my half-awaked consciousness, and set going a whole train of other associations which, in the circumstances, would be practically unchecked by visual or other impressions coming from outside. The nature of our minds compels us to assume that there is a cause for everything, including every thought that comes

across our consciousness. But, just as I find in my waking moments all sorts of pictures on the screen of my mind, some lingering, some vanishing as soon as they are formed, so are my dreams varied, different images and different events characterizing each, but all composed of memories of percepts and of concepts which have, at some time or the other, held my waking attention and interest.

This faculty of memory is one of our most striking possessions. When we reflect on it, it is remarkable that years after we have had some experience—the sound of someone's voice, the disapproving expression of a critical friend, or the sight of a brilliant sunset—the sight or the sound, or whatever it may be, suddenly comes into our mind, almost exactly like the original impression made when the event actually happened. If we had no memory, we could never acquire any store of knowledge; for everything we know, even that the object on the table is an orange or a piece of cake, depends on our putting together the sense impressions of the moment and comparing them with our memories of previous sense impressions, like and unlike.

I have read an account of a boy, intelligent and otherwise quite healthy, who had from his birth been unable to see on account of some defect in his eyes. In spite of his handicap, this little boy got to know all sorts of objects by their feel, their taste, and their smell. When he was eight years old, the doctors operated on his eyes, and enabled him to see. He at once got the usual impressions of colour, light, and so on, but he could not recognize *by*

*looking at them* any of the objects which he could easily distinguish by touch, or by a combination of touch and his other senses. He had no previous visual experiences and therefore no visual memories. After a while, he acquired a store of such memories, and was then able to name things by looking at them just as other boys can do.

Memory is a very difficult thing to explain; and it is not at all an easy thing to picture to oneself. Obviously, we cannot have millions of little discs like gramophone records stored away; and, if we try to think of mental processes in terms of material processes, we are very apt to be led astray. It is better to accept obvious facts than to attempt fancy explanations of them. Memory is sometimes spoken of as though it were a peculiar property of the brain; but there is good reason for thinking that some degree of memory is possessed by every kind of animal, even if its place is too low down in the scale of evolution to have a brain at all. Indeed, something of the nature of memory seems to be a property of all living tissues. To confine ourselves for the moment, however, to human memory, or, rather, to that part of it which has relation with our consciousness, we find, if we look into the matter, that an act of memory is composed of three more or less distinct events or stages; firstly, the retention and storage of an impression; next, its recollection; and, thirdly, our re-cognition of it. When a sensation, or an emotion, or a thought, has passed across our mind, it would seem to make what we may fancifully call a rut along its course. This may fill up with the passing of time, especi-

ally if the impression made is not a very deep one, but usually it is not quite obliterated. Sometimes it seems hardly to fill up at all. Mental events occurring or passing in the neighbourhood of this rut are apt to fall into it; and then they run along it almost as inevitably as the wheels of a train follow the rails. This produces a mental effect much like that brought about when the first message took this line and left its little rut behind it.

Our sensations in themselves, as I have already explained, mean nothing. They are interpreted and given meaning by the mind. In the absence of sensation, we should have no knowledge and no thoughts; but it is only when the mind has taken these sensations, translated them into its own language, and fitted them together, either automatically in the order in which they usually occur in nature, or fancifully and imaginatively, after the manner of a dreamer or an artist, that we can be said to have knowledge and to think.

When a line of thought, or some deliberate procedure involving a line of thought, is repeated again and again, the wheel-rut (to continue our simile) gets deeper and deeper; so that the thought or the procedure runs along it more and more easily—often so easily that we are scarcely conscious of it at all. It is in this way that people become expert bicyclists or piano-players or typists. Memory and habit are closely linked together. They all depend on the fact that a sensation, or a thought, or an act leaves behind it an impression, which makes it easier for the same sensation, or

thought, or act, to be repeated. I said just now that the depth of the impression of a sensation or a thought varies with the extent to which we are interested in it or emotionally moved by it. Lots of things we hear fail to interest us, either because our attention is elsewhere occupied, or because the subject is one that does not link on to our current train of thought. These leave but a very small impress on our memory. As the saying runs, they go in at one ear and out at the other. Unless we attend in the first instance, what we hear or see will help us very little in our future thinking. Our memory of it will be like one of those faded photographs that might as well be of one person as of another.

Usually, when we are in normal health, we easily distinguish between a first-hand impression and a memory-image of that impression. But, sometimes, if we are very ill and the nerve accompaniments of our mental activity are poisoned or otherwise affected by our illness, or if our mind itself becomes diseased, we may suffer from what are called hallucinations or delusions—that is, from memory-images, or abnormal arrangements of memory-images, which we cannot distinguish from real ones. A similar experience is often met with in dreams. You will possibly ask how we can, as we usually do, so readily tell whether a picture in our minds is a 'real' one or a memory one. I fancy that what happens is something like this. All the sensory impressions, the appearance, the sound, and the scent, may be almost identical, but we ourselves are constantly developing, and our emotions do not react to-day quite as they did yesterday.

There is thus a slight but noticeable difference between our emotional reaction now, and that emotional reaction which we formerly experienced—the reaction which is revived or recalled as a part of our recollection. These two different reactions stand in our consciousness side by side, and we cannot help noticing that they are not quite the same. This seems to be a likely explanation of our power of distinguishing between immediate reality and memory.

Our storehouse of memories is of varying depth, and its contents may be found and brought into the light of consciousness with varying degrees of ease. Some are, as it were, on top, and we can put our hands on them in a minute; some are a little more deeply buried, and will be recalled only when some unusual occurrence brings them to the surface, or, as we say, reminds us of them. Others are buried deeper still, and by no effort of will and through the stimulus of no event that is likely to happen to us do they again come into consciousness while we are awake and in good health. Some of these no doubt figure in our dreams when our workaday senses are nearly asleep, as also when our minds are disturbed by fever.

Psychologists, in recent years, have been very busy in attempting to unravel the marvels and mysteries of what they call the unconscious mind. We have, as I have illustrated, experiences every day which convince us that contained in our minds are all sorts of things of which we are at any given moment unconscious. Many people think that our stored impressions, or some of them, even during

the long time that we have forgotten all about them, have been influencing our conduct and modifying the impressions made by subsequent experience. We cannot here go into all the details of the various theories that have been offered as explanations; but until we have studied them, and until our reason is convinced, we shall be wise to keep an open mind as to the way in which, and as to the extent to which, these buried memories affect our lives.

The division of the mind into two separate and opposed parts, the conscious and the unconscious, seems to me a very arbitrary and unscientific proceeding; but we all know so very little about the real nature of the mind that most people readily accept any explanation that is put forward with an air of certainty and authority. I am inclined to think that it is only when we are conscious of an impression that it is capable of starting changes in our mental and bodily reactions. It is, however, clear that these changes may continue after we have ceased to be conscious of their causes, if no effacing impressions, accidental or deliberate, come subsequently into the field of consciousness. It is commonly said that such impressions are automatically kept in the background because they are unpleasant, and that it is only when we are in a semi-dazed condition—as, for example, when we have been hypnotized, or when the guardian of the doors of our consciousness is asleep—that they come into the light and can again be recognized. But the experience of most of us does not support this theory; for pleasant impressions seem just as prone as painful ones to fall to the depths of

memory, only to be remembered when some associated impression recalls them.

We have a tendency to turn the bright light of consciousness on to those things which, at the moment, most actively interest us. But there are always, around the edge of the picture, numerous other items, of which we are barely conscious, because our mental gaze is focussed on the central event or figure. When our concentration slackens, we may ask ourselves if, a minute before, we did not hear the bell ring, or a voice call, or someone go out of the room, although at the time of their happening we scarcely seemed to notice these things. Doubtless, these shadowy impressions are, like the more vivid ones, stored in our memory, and are liable to be recalled at some future date when they are relevant to the interest which then possesses us. The incidents of our own childhood, however agreeable or disagreeable they may have been, and however intense their emotional effect, are, as a rule, buried deeply below a whole mass of subsequent experiences of more interest to our further-developed minds. Consequently, we remember but a few of them; and it is, of course, possible that sometimes an impression that has never been recollected and therefore never consciously interpreted has given an emotional bias to the rest of our life—a bias which would have been corrected had we become aware of its cause. All this, however, is pure speculation, and is referred to here merely to warn you against accepting as proved some doctrines which are just now very popular.

# CHAPTER VII

## HABITS

If we want to build up a new habit, or if we want to be expert in anything, whether it is driving a motor-car or, if we are babies, even walking, we have to concentrate our attention on the separate steps or movements, each in turn occupying the centre of our field of consciousness. But, after a while, the whole business gets easier and easier, until at last it is almost automatic. That is to say, we no longer need to bother about the separate movements at all. After we have reached this degree of expertness, it is a curious fact that if, for any reason, we bring our conscious mind to bear on some procedure which we have learnt to carry out quite well almost unconsciously, we are very likely to make a mess of things. Anyone who has ridden a bicycle or driven a motor-car will have experienced this; but perhaps one of the most striking examples of the difficulties arising from the intervention of conscious attention in the carrying out of an established habit is afforded by what is known as 'stage fright'. Inexperienced actors and public speakers, even though they thoroughly know their parts, or the subject about which they are going to talk, will often, by reason of over-anxiety, focus their attention on each word they are going

to say and each movement they are going to make, and, in consequence, become so self-critical and hesitating that they stand spellbound before their audience, unable to say a word or move a limb. Nor is this paralysis confined only to the inexperienced; for many celebrated orators have confessed to this weakness, and have acknowledged that whenever about to make an important speech they have been compelled to resort to artificial means in order to dull the critical faculties of the mind. It is a great mistake, however, to suppose, as some psychologists would urge us to do, that the conscious mind and the unconscious mind are two rival powers, engaged with one another in a constant fight for supremacy. The light of consciousness is usually concentrated on the impressions made by novel or unusual situations, presenting difficulties or mental problems that call for the temporary diversion of mental energy from its accustomed channels. As soon as the necessary adjustments have been made, the spot-light is turned off, or, more correctly, turned in another direction.

There is a proverb to the effect that 'practice makes perfect'. This is true of our simplest acts, even of those of which we are barely conscious. An act, whether reflex, instinctive, or habit-formed, frequently repeated in consequence of the recurrence of the stimulus to which it is the natural reaction, tends to become prompter, more efficient and, as we say, easier. I have reminded you how much less effort is required to carry out any procedure, such as swimming, or typing, or playing the piano, after we have had some practice, than was needed when we

began these exercises or occupations. The channels along which our energy runs, to go back to our old simile, become deepened by constant usage. On the other hand, a reaction, or chain of reactions, which has not for some considerable time been much called into operation, is apt to get more difficult and less efficient. The channel, if long disused, seems to get silted up. This effect of practice, though detectable, is less noticeable in the case of the simple reflex tendencies that are born in us. Their channels are evidently deeply dug and well constructed to start with. It is those which we dig for ourselves by the process I have described as 'conditioning'—those which are concerned in the carrying out of new or acquired habits—that most clearly illustrate what have been called the laws of use and disuse. Thus is to be explained the hold on us which good habits and bad habits alike often secure, even though our first yielding to the inclination but slightly interested us and but slightly stirred our feelings. The conditioning of our inborn tendencies and the strengthening or perfecting of the variants thus brought about make up the basis on which the whole structure of education is built.

The capacity for learning which any animal possesses is determined mainly by the following factors; its inherent equipment for memorizing, the number of its established instinctive responses, and the variety of its inborn propensities. Learning would be impossible without memory. Whilst it is probable that even the humblest animalcule has some memory, and some capacity for rudimentary

learning, it is obvious that these capacities vary enormously as between one animal and another. But so-called instinctive and so-called intelligent reactions are but combinations of inborn appetites, propensities, and abilities—intelligent responses differing only in that those native abilities have been modified and developed by adaptation or conditioning. The greater, more varied, and less specific the inborn abilities, the greater the possibilities of adaptation and of learning. 'Whosoever hath, to him shall be given, and he shall have more abundance.' As McDougall remarks in his interesting book *The Energies of Men*, 'Education is not a levelling process, but rather a differentiating process; the more opportunities for education are multiplied and freely offered to all, the more surely will the better endowed increase the interval between themselves and their less gifted fellows'. In so far as we are dependent on immediate impressions of outside objects—that is, on what are called percepts—for the material of our thoughts, and for provoking our reactions, our thinking is bound to be slow and at the mercy of time and occasion. Memory not only makes us in large measure independent of immediate impressions on our senses, but it also facilitates quick thought in that it furnishes us with an ample supply of images from each of which we can select those aspects which are directly relevant to the matter on which our attention is concentrated. Though, therefore, it is not true to say that in all our acts, or even in most of our acts, we are impelled by the anticipation of the pleasure we shall get from their performance, it does seem to

be true that the pleasure or satisfaction which has accompanied the doing of the same or a similar deed in the past has helped to deepen that particular channel of expression—to facilitate the flow along that particular route. When Cranmer was being burnt at the stake for expressing opinions which those in authority considered harmful, he is said to have deliberately thrust his right hand into the hottest part of the flame, because with that hand he had, out of fear, signed a recantation, which he afterwards tore up. Cranmer cannot, in any reasonable sense of the word, be said to have been seeking pleasure in acting as he did. But we may assume that throughout his life he had experienced pleasure in the reproving of conduct, whether in himself or in others, that offended him. The actual motive of his heroic act was that impulsive force which inclined him to reprove and punish wrongdoing. The carrying of any instinctive urge to its natural end is satisfying or pleasant, and this has little to do with any agreeable or disagreeable sensation which may be experienced *en route*.

Action in accordance with nearly all our primitive instinctive tendencies is pleasurable or, at any rate, less unpleasurable than going counter to them. As our minds develop and our conscious aims or ideals get further away from crude utility, the impelling power of some new urge may outweigh in attractiveness, in persons of strong character, the pleasure-yielding gratifications of inborn instinct. The martyr, voluntarily sacrificing his life at the stake, rather than betray his ideal, is, as

much as is the child stealing jam from the cupboard, following the path of happiness, as he conceives it. But, because we inevitably seek to gratify our most intense desires, it must not be assumed that the conscious desire for pleasure is the motive which impels us to act as we do. In any given situation, our reaction is, of necessity, the outcome of our nature; and although pleasure, whether crude or subtle, always accompanies action that is in accordance with our nature, it is not necessarily that which we have in our minds as the goal we are seeking. The mother, unable to swim, who plunges into the river in a blind effort to rescue her drowning child, and the soldier who, without hope of recognition, remains on the bullet-swept battlefield to tend his wounded comrade, though they experience a satisfaction far more intense than that which most conscious happiness-seekers ever enjoy, are but obeying the profounder call of their human nature. Comparable in many ways are the desperate efforts made by many wild animals to defend their young, at the almost inevitable cost of their own lives, when their homes are invaded by powerful beasts of prey.

# CHAPTER VIII

## KEEPING OUR END UP

When people are ill, doctors try to cheer them up, and to fill them with confidence that they will soon recover. It is a well-known fact that people who take a hopeful view of their illness, and have faith in their doctor, are far more likely to get well than are those who give themselves up to gloomy despair. You may have heard of a Frenchman called M. Coué, who a few years ago drew popular attention to a form of treatment called auto-suggestion. This consists in persuading yourself that you are getting better and better every day; and it is a fact that, if every morning you say words to this effect, and really have faith that this suggestion will favourably influence the effort your body is making towards recovery, you increase your chance of getting well quickly. It would seem that, though so many of our bodily activities go on below the level of our full consciousness, that is, without our knowing much about them, these activities are yet capable of being influenced by our emotions—which, in turn, are largely determined by our conscious thoughts and beliefs. We are almost compelled to pursue anything which occupies the very centre of our attention. When we are learning to ride a bicycle, we are apt to keep our eyes fixed on

some object in the road that we wish to avoid. The result is that, instead of avoiding it, we more often than not ride straight into it. We soon learn that the best way of preventing such accidents is to direct our sight and attention along the line we really wish to follow. This helps to explain our course of action when we are obeying some simple instinct. We form in our mind a picture of some goal, and it is this picture that leads us onwards. This pictured goal rarely coincides, or corresponds, with the life-preserving end of which the instinct is an instrument. The goal we have in mind is generally reached at a much earlier stage in the sequence of events. Thus, the collector's picture of the future is of himself in possession of a fine collection, not of himself safe from risk of starvation amid winter scarcity; and the pictured goal of a bird in spring-time is probably herself in possession of a beautiful nest, constructed according to the fashion of her race; not the rearing of young ones who will carry on the species to which she belongs.

I have explained that behind all our wishes and inclinations are certain urges or tendencies to action which are born in us. I have further explained that, as a result of experience, these tendencies become mixed with, and in a sense modified by, pleasant or unpleasant things associated with their fulfilment. These conditioned or adapted instincts play a very great part in the lives of civilized people; for, as a rule, the crude original appetites which lie behind the instincts—such appetites as hunger, and even sex-love—are more easily satisfied nowadays than they were in primitive times.

It is obvious that sometimes our instincts or complexes of instincts conflict with one another; something happens, or some situation presents itself, which acts as a spark to two rival sets of impulses, as, for example, that of personal dominance and that of sympathy with others; and the stronger of these may well be the one which is less likely to win general approval or the approval of our conscience. A mental conflict thus arises, a conflict that may be resolved in one of two ways. We feel that, somehow or other, harmony or equilibrium must be re-established in the mind, as it always has to be in the body in parallel circumstances. If we are accustomed to look boldly at the facts, no matter how distasteful they are, we can coolly size up the relative desirability of the two lines of action to which these two impulses severally drive us, measuring them by our own personal scale of values, and finally 'choose' one or the other, or some compromise between the two. Few people, however, have characters sufficiently pronounced, or minds sufficiently clear and courageous, to act in this way. If we blindly and unreflectingly obey the stronger crude impulse, subsequent disharmony is almost inevitable. What nearly all of us do then is to give ourselves up to a little self-deception. In other words, we indulge in what is called rationalization—that is, in finding, after the event, some plausible explanation of which our conscience can approve. This is not usually conscious humbug on our part. It is a sort of almost unconscious defensive measure, protecting us from the conscience-pricks which

otherwise would afflict us. Examples of this sort of thing might be quoted by the hundred, and there are lots of proverbs that have this fact as their basis. 'The bad workman quarrels with his tools' is one. Parents and schoolmasters who feel enraged and resentful at some rebellious act of a child or pupil not infrequently justify their natural anger by thinking and saying that the punishment they instinctively inflict is solely for the good of the victim.

To rationalize in this way is to misuse our faculty of reason; but it must not therefore be thought that reason has no place in the healthy guidance of human action. Although in itself it has no driving power, it serves, when properly employed, as a sifter, a valuer, and a clarifier, helping in these ways to direct our impulsive force along the lines best harmonizing with our permanent wishes and desires—that is, with our character.

Perhaps here I ought to say a word about morality. Most people regard as moral, conduct that is in accord with the generally accepted opinions of the country in which they live. As a rule, these coincide with the teaching of the official religion of the moment. Often this works very well, for these teachings have a basis of utility, originally having been adopted as promoting the fullest and most harmonious life then possible. There is, however, a very great danger in this passive acceptance of outside authority; for a time inevitably comes when, owing to the alteration of circumstances and the further development of human ideas, the established rules obviously conflict with the conclusions

of personal experience and common sense. In all great periods of transition, when the conditions of society are rapidly changing, and some new vision of life's possibilities is beginning to dawn, we find that established religions and established moral rules lose their hold on the minds of a very large number of people who have hitherto been accustomed to rely on them for guidance. Many of these people are then left without a map and without a compass; whereas, if they had been trained to use their own reasoning powers and taught to appreciate the true objects of morality, they would have been able to steer their course towards a satisfying goal without hesitation or embarrassment.

As we get older and our experience grows, our emotional and motor reactions to outside objects and persons have no longer the simple character they had at first. They are coloured by our reactions to, and experiences of, similar objects and persons in the past. We most of us are, in fact, no longer guided by a comparatively few simple instincts, but by a large variety of complex sentiments. I will try to give you a simple example of how a sentiment is formed. Someone of whom I have not previously taken much notice makes an offensive remark likely to humiliate me in the eyes of my friends. I flush with anger, and am conscious of a strong impulse to strike him. Other impulses quickly neutralize this one, and I suppress the crude physical expression of my indignation. But the sense of indignity remains in my mind, and the picture of this man constantly recurs to me. With the picture come repetitions of the

emotions and impulses that followed the insult. A hatred towards this man develops in me, and, should circumstances bring us together again, incidents may well occur that will strengthen my growing sentiments of blended anger and fear. My attention is held by any hostile criticisms of him that may come to my ears, and, willy nilly, I pay little heed to any comments of a more favourable kind. If my sentiment is sufficiently strong, it is likely to spread to men who look like my enemy, possibly even to members of his profession, almost certainly to the objects and pursuits in which he is specially interested. It is very difficult to approach with an open mind—that is, with real fairness—any person in relation to whom one has developed a powerful sentiment. Of course, sentiments are just as likely to conflict with one another as are the instincts of which they are conditioned and blended developments. An individual, for example, the intimate friend both of someone we particularly dislike and of someone of whom we are particularly fond, may well come within the sphere of influence of two of our rival sentiments. Everyone must be able to recall occasions when an attitude of dislike or distaste for some thing or some person has been changed, first to tolerance, and then to positive liking, on discovering that he or it is particularly liked or admired by someone to whom we are devoted.

Sentiments, then, are a kind of habitual mental reaction to specific persons or objects, or to specific groups of objects, and I have pointed out how other objects and persons associated with those

around which our sentiment has been built up may come within its sphere of influence. But these associated objects of sentiment, as we may call them, need not necessarily exist as outside entities. They may be images or abstractions in our own mind.

It is our particular blend of sentiments that constitutes our character; and this is likely to be definite or pronounced only if certain of our sentiments are sufficiently impressive to outweigh any other sentiments with which they may happen to conflict. Whilst, therefore, the possession of a strong character may well fill its owner with thankfulness, it affords no excuse for vanity or complacency.

> Man is a shop of rules, a well-truss'd pack,
> Whose every parcel under-writes a law.

THE END