# PLAY IN CHILDHOOD

by

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# INTRODUCTION TO THE PAPERBACK EDITION

DURING THE years that have passed since the first publication of this book we have learned a great deal more about children, from every point of view, than we then knew. For most children the circumstances of life also have changed beyond our imagining in 1935.

The growth of modern cities, the development of motor traffic with its speed and danger, the overwhelming size of many transport vehicles, to the onlooking child seeming like houses moving at speed: the height of buildings looking from whose windows human beings diminish to the size of ants: the noise of aircraft: have taken from childhood its birthright of space, safety and freedom of mind and body to explore and enjoy, within and without doors the ever new excitement of 'finding out' and playing with what they find.

With relics of bombed and devastated cities, homeless families and massed children housed in slum buildings, the opportunity for spontaneous play, with other children or alone, becomes more and more difficult to achieve. As this opportunity diminishes or even disappears the need that we should understand what play is and why it is vital to our children's life becomes more and more urgent.

At a time when every child had room to play, when toys were simple, and simply beloved; when there were trees to climb and seeds and plants and small living creatures to tend and love and watch as they grew, adults took little notice of children as children or of what they did and said. Apart from that of great and original minds, interest in play is relatively new. Realisation of its central importance, both to child and adult, gathers only slowly as civilisation becomes more and more standardised and opportunities for experiment and the experience of spontaneous play decrease.

To understand what is happening within children as they play now becomes necessity for all who have responsibility for children, young children, older children, children in groups and children by themselves, if these are to grow up into self reliant and responsible adults.

This book is a map of the country of play, drawn by the writer and the children together, with the co-operation of all the colleagues who have helped to explore and to record their explorations of that good country.

As with real countries, maps can be drawn from observations made by aeroplane, photographed even from a plane or helicopter. It is thus very often that children's play is seen by adults. Their observation may be keen, but what is observed is seen from above. Many books on children's play are of this nature, accurately descriptive and therefore useful. But they are not integrated with the children who play nor do they provide clues, as to why children do what they do and what the 'feel' of it is to them.

There are other books which give us insight into the imaginative life of children, the way things and people look to them and the stories that tell themselves in a child's head. These too, are valuable, and throw light upon the helicopter map.

Some books are concerned with how play can be used to help learning, to stimulate observation, to develop skills, or to increase the socialisation of the child. All these are legitimate uses made by the grown up world of the play impulses of children. They do not help us to know why a child plays or what is happening within him when he does: why, in full it is that it is so important that he have room and opportunity to play and appropriate tools to play with.

A map — if it is a good one — conveys, in its symbols, three dimensional information: of mountains and gorges, rivers that fall from heights and geological contours that suggest hidden veins of ore.

Curious, though it may seem, the same is true of the map of play, though at present we are only beginning to know either the true scope of play or its meaning to those within whom it originates. The word 'play' itself has an ancient lineage and wide scope. For example in Roget's Thesaurus eight synonyms appear — (p. 498) operation, scope, oscillation, music, dramā, action, freedom, amusement: and fourty two other usages are listed. These are verbal symbols coined from helicopter observations.

When, however, ways are found of discovering, from the

child's point of view, what is the nature of the experience any one form of play yields to him who plays it, qualities of depth and width of differentiation are revealed which must be entered on the map of play, as contours, caves, underground rivers and lakes which, though invisible to the helicopter, can profoundly affect the landscape registered.

Since play then has an outer and an inner aspect; an outer form which appears to the play fellow or adult observer, an inner or psychological meaning for the child who plays, to be more fully understood it must be divided into categories and thus classified. No ultimately adequate classification will be possible which does not take both aspects into account.

This book records an experiment in such a categorisation and classification of play as it has been observed and experienced by the writer in a clinical situation. The way therefore to use this book is to study each category separately, observing the play of children as we meet it and training ourselves, with the book in hand, to see into which category what we observe would fit. Such a putting of an item into a given category will fulfil a double purpose: it will, as we work, enable the total pattern of categories to be assimilated and memorised and at the same time will give an inner meaning and purpose to the individual item. If the categories are appropriate the entry of each item into its place will tell us a great deal about it.

It must now be emphasised that if a classification is to be true and organically interrelated, as well as logical, it must also be experimental. Every classification represents the point of view from which it has been made. In a new subject, there may emerge at any time, new elements which may make the older classification of the subject a grouping by qualities which have now become of subsidiary rather than primary importance. When this has occurred, the classification in question should be thrown overboard and a newer one made more closely in accordance with the qualities now proved to be essential.

A classification is a finger-post, not a railway system, and in a living subject the object of a classification is to stimulate thought and to enable assimilation of the present level of understanding of a situation.

The standpoint from which the classification used in this book

has been invented is the function each form of play serves to the child who plays it. It is suggested, therefore, that there is play that expresses the bodily impulses of the child; that apperceives his environment; that prepares the child for life; that enables him to mix harmoniously with his fellows. Within each of these groupings an attempt has been made to show the existence of a number of interrelated varieties of play within the group.

Play as bodily activity is the earliest form of all children's play. During the time that speech is being acquired, play as the realisation of experience gained in previous years is the next necessity of childhood. Play as the demonstration of phantasy follows hard upon the footsteps of play as interior realisation, and interweaves all the way with it; experience feeds phantasy and phantasy interprets experience.

The child of four and five, who is learning to wield the tool of speech, and has made terms with his earlier experience, turns with increasing confidence towards his environment. Play is his means of expressing this new orientation and of extending his understanding of his physical and social environment.

In and out of play as a realisation of environment goes play as a preparation for life. As early as children think of "life" as all, they may "play-train" themselves to fit into it. This form ot play comes to its climax in middle school years and with adolescence fades into reality.

(No child combines naturally with its fellows before the age of four; after that, delight in social play appears and develops in frequency and complexity until it reaches its maximum at about twelve to fourteen years. Group games, therefore, are considered at the end of this series, because, although many group games are played in far earlier years, yet it is the only form of children's play which is carried forward to form a major element in adult life.)

Comedy and the mechanisms that determine the choice of play are common to all ages. Chapters IX and X are devoted to separate consideration of these factors.

The basis of the order of classification of the main groups of play considered is, therefore, one of developmental sequence and of historical growth. After four, each child may play all these games at any age, but the writer suggests that the peak of

interest comes in the order of Chapters III to VIII. It is the particular feature of neurotic children that they may adopt any form of play at any age, and in the examples cited it is not by any means always the younger type of play. Such anomalies are characteristic of the neurotic personality throughout life.

A child, as is an adult, is a creature of varied needs and activities. A child needs to eat, to excrete, to sleep and to learn. We see here also that it needs, as adults also do, to relax, to laugh, and to create; and that the problems of understanding and adaptation that oppress the adult so hardly, bear also upon the child.

In this book, therefore, play is regarded not as an accident but as an essential function of childhood basically concerned with the adaptive process; related to that process which must continue throughout life* and which profoundly affects man's ability to survive in his physical universe and ever-changing social environments.

Play when looked at from this angle can be seen to serve four purposes.

1 It serves as the child's means for making contact with his environment, and under this heading comes all the play which are considered in Chapters VI, VII, and VIII. Such play in childhood partakes of the nature of, and fulfils, much of the same social purpose as work in adult life.

2 It makes the bridge between the child's consciousness and his emotional experience, and so fulfils the rôle that conversation, introspection, philosophy, and religion fill for the adult. In this category fall the types of play which are considered in Chapter IV and part of Chapter III.

3 It represents to the child the externalised expression of his emotional life, and therefore in this aspect serves for the child the function taken by art in adult life.[1] Chapter V and parts of Chapter IV and some of the play described in Chapter IX describe play that fulfils this function.

4 It serves the child as relaxation and amusement, as enjoyment and as rest, as will be seen in Chapter IX.

*See Huizinga. Homo Ludens.

The classification adopted in these chapters is therefore provisional, in that little is as yet known of the ultimate nature of play. It is experimental, in that it has arisen out of experimental work; and it is put forward with the hope that it can be used as a practical tool by which the varieties of meaning that underlie the behaviour we speak of as "play" may be differentiated by those working with children, and so enable a better understanding of the children we love and teach.

And a few pages later he quotes another similar example :

" P. McL., a girl, observed from three and a half to five years of age, was a highly imaginative child, as shown by the power of make-believe in play. The soft india-rubber was to her, on the teacher's suggestion, say, a baby, and on it she would lavish all her tenderness, kissing it, feeding it, washing its face, dressing it in her pinafore, etc. So thorough was her delight in the play that the less imaginative children around her would suspend their play at 'babies' and watch her with interest. Whilst a most indifferent, restless child at lessons, whenever a story was told she sat motionless and wide-eyed till the close."[1]

In small children the material chosen to express phantasy is always matter that is malleable and has no definite meaning. The phantasies that can be expressed in this way are as shapeless in form as the material in which they are expressed is vague in meaning, and are constructed of many elements. These are examples :

*E. C., Boy, aged 4.* He was piling wet sand into the circle of an enamel ring, using more and more, and patting it down firmly. Then he made a hole with his finger right down the centre, withdrew it slowly, and looked down the hole, saying slowly, " What a deep, dark hole ! "

Worker : " Is there anything at the bottom ? "

E. C. : " No ! "

Worker : " Would you find anything if you went down the hole ? "

E. C. : " Yes, I should find myself at the bottom."

He then emptied the sand out and said it was a pudding.

*On another occasion.* He walked into the playroom carrying a paper engine he had cut out at home, and went to the dry sand tray, where he made a snake, " a wiggly one," with his finger. He also made two rivers coming from mountains. They met in the middle and formed a pond. Nobody was allowed to swim in it. He continually made circles with his finger in the dry sand, or made circular islands ; now and

[1] *Studies of Childhood*, p. 46.

again he buried the palms of both hands in the sand or covered one over with sand and said with evident joy, " Now I'm the dirtiest boy in the world."

*G. D., Boy, aged 6.* He went to the sand tray and filled a saucepan with shell-scoops. He then began to fill a money-box with sand through the slot, and noted the comparative softness and warmness of the sand in the money-box. When this was full he tipped it into a mug ; when the mug was full the sand was tipped into a boat ; and when the boat was full it was to be pulled by a very strong white elephant ; and when this was tipped out we should have made sea-sand. (The heap from which the sand was originally dug was not sea-sand.)

*M. C., Girl, aged 11.* She was playing with sand, and getting her hands very dirty, enjoying making a mess. She looked longingly at this messy sand as if she would like to play with it for longer instead of doing something more definite. When she was told she might, and that she could make mud pies if she liked, she was delighted. Eventually she made two sand shapes with a house on each and some trees on one, and put shells on the bottom of the tray. She said she would like to make a seaside, but as she had never been there she did not know what it was like. Leaving this, she went over to modelling clay, and seemed to enjoy it immensely, but did not make anything with it—only fooled about, making herself as dirty as she could.

In considering this feature of children's lives, we are brought back again to the factor we have noted twice already. In all forms of human life to which we have access so far, there appears to be an impulse to reproduce in some way experiences which have strongly moved the spirit. As far back as we have records of mankind, traces of such expression are found in drawings, pottery, and sculptures, and these productions seem to bear some relationship to the lives and experiences of the people by whom they were produced. Whether these designs are sympathetic magic, e.g. representation of the successful

killing of game in order to bring about future success in hunting, or spontaneous expression of delight in past success in, for example, hunting, is an open question, but, whichever version may be true, it is quite certain that there was a connection between the production of these designs and the lives and experiences of the people who made them. Just so is it with children.

Moreover, it is by means of play of this kind that ideas develop. Play is in a sense artistic creation ; each piece of play of this kind is a new creation, and its creation is intimately connected with the development of thought, for until a concept has been expressed, or an experience externalised—it cannot give place to another thought.

All the equipment of the playroom at the I.C.P. can be used, and is used from time to time, for the expression of phantasy, but the most significant piece of apparatus is the " world cabinet "[1] and the sand tray. A child confronted with a " world cabinet " finds material ready to his hand for the expression of almost any sort of phantasy or concept—material that is malleable to his thought, and can give him just the aid he needs in his struggle to externalise his concepts of the world so that he can define them, limit them, and eventually master them.

The advantage of this type of material is that it allows, like a cartoon or a dream, of two layers of meaning :

1. On the surface is the manifest content, the actual scene which is represented.
2. By associative links between the items used to build up the scene, and the child's own past experience or interior life, ideas entirely different from those shown in the manifest content can be expressed.

Children of all ages make use of the " world " material, but perhaps it is more commonly used between the ages of seven and thirteen.

It must, however, always be held in mind, in attempting to follow the lines of thought of a child who demonstrates in

[1] See p. 49.

this way, that besides the manifest and latent significance, every object used is liable to have three meanings :

1. The obvious one—lamp-post, hippo, rabbit, etc.
2. The correct or incorrect knowledge possessed by the child about the actual animal or object.
3. The significance which the animal itself has for the child. Thus, a rabbit can be an actual rabbit and play its ordinary part in a given scene ; it can be a fantastic figure, compounded out of fairy-tales, as in *Alice in Wonderland* or Brer Rabbit in *Uncle Remus*, and at the same time it can signify the child's own self, felt as a hunted thing, a thing that would like to burrow into holes and escape.

And not only the " world," but all the material in the playroom, as also music and acting, can be used to express and work out a child's phantasy problems.

Children use the " world " material in three ways :

**1.** To display ideas which are quite inchoate to the adult and yet seem to the child to have a logical sequence. For example :

*M. B., Girl, aged 9.* She made two small caves in the sand. In one she said there was a small animal with some eggs, but a man came and killed the animal, and the eggs were never hatched. She then made a large mound of sand, hollow inside. It was so high that it reached up to the sky, " where Jesus and God are." Up in the sky it was foggy, and the aeroplanes could not see one another. Only aeroplanes could reach the top, and one brought eggs and placed them at the bottom of the hole in the mound, where no one could see them. Some horsemen were placed riding round the mound to keep people away. When the eggs were hatched, robins would come out. Some people wanted to poison the sand, and they emptied bottles of poison about, and in the water, so that children might drink it. People had to be very careful where they took their children, lest they were poisoned. In response to some question about the mound and the eggs, she said a giant had destroyed a lot of them, and wanted to

## CHAPTER VII

# PLAY AS PREPARATION FOR LIFE

> " The plays of childhood are the germinal leaves of all later life ; for the whole man is developed and shown in these, in his tenderest dispositions, in his innermost tendencies. The whole later life of man, even to the moment when he shall leave it again, has its source in the period of childhood."
>
> FRIEDRICH FROEBEL.
> *Education of Man.*

PROFESSOR KARL GROOS has pointed out that the young of animals play, as it were, by instinct, and that the form of their play is a rehearsal of the rôle they are to fill in later life.[1] Play, then, is a kind of mimic drama of maturity, charming because of its harmlessness and purposeful in the training it gives to the developing powers of the young animal.

As man, besides being himself, is also biologically a mammal, it would seem to be natural that somewhere and in some way this element should appear also in the play of children.

In his study on *The Play of Man*, Groos draws particular attention to the hunting and fighting plays of primitive peoples. Because, however, the rôles filled by men and women in a civilised society are of such infinite variety, and, compared to the lives and behaviour of adults in primitive societies, of such indefinite outline from the child's point of view, one would expect it to be difficult to trace this element clearly in the play of children of more developed societies.

Plant life provides a useful analogy. If one could imagine an acorn to have consciousness, there would be within it, in

[1] See Chapter I, p. 31, and also *Play of Animals*.

some dim fashion, a teleological consciousness striving towards the minute and definite details of the tree that is to be.

So, it would appear, must it be to some extent with the young of the human species.

The play of children shows that the impulse to grow and develop into specific and definite preconceived patterns exists in the vast majority of them. The acquisition of one branch of skill seems by the very nature of the child itself to suggest a new goal of yet greater difficulty. For instance :

> " When Strumpell's little daughter learned to grasp easily," says Karl Groos, " she was no longer satisfied with holding ordinary things, and took to picking up objects so small as to be difficult to get hold of."[1]

This impulse to the acquisition of ever greater physical skill seems to be universal, but the form such an impulse takes is suggested to the child by the adults he sees around him, by the stories he reads, by the dreams he dreams. The play we are to consider in this chapter is the bridge between the helplessness of childhood and the possession of the power and skill for which he longs.

Throughout his work, Groos shows the existence of a definite relation between the nature of the child's struggles in play, and the type of skill and prowess he will actually need in after life.

> "Play," he says, "enables the young animal to exercise himself beforehand in the strenuous and necessary functions of life, and so to be ready for their onset."[2]

He gives examples of games whose whole purpose is the development of forms of manual skill, as for example :

> " Rochholz thus describes the Swiss ' Fadmen ' : ' A boy sitting in a basket which is swung to and fro in the air gets a prize if he succeeds in threading a needle during the progress.' "[3]

[1] *Play of Man*, p. 102. [2] Ibid., p. 102. [3] Ibid., p. 102.

Every child, unless he is prohibited by his elders, tends spontaneously to evolve this sort of play for himself, and it is possible to make even the greater part of education work itself out along the lines of play.

> " These familiar facts," writes Professor Percy Nunn, " all illuminate a single truth—namely, that the play-activity is subject to the general law that spontaneous activity, when not baffled or obstructed by unfavourable circumstances, tends always towards increasing perfection of form, to more complete expressiveness, to a higher degree of unity in diversity. Thus we are led to the idea that nature invented play not merely as a means of disposing harmlessly of the young animal's superfluous energy, but as a device for using that energy to prepare him for the serious business of life."[1]

Such play falls into several natural divisions : motor plays, games with the senses, handcrafts, games of skill and risk, constructive plays, and mental games.

Let us consider first *Motor Plays*.

We have discussed in Chapter III the child's use of his body to work off steam, to experiment with emotional states, and to demonstrate phantasy ; but long ago Froebel noted the intense interest that boys take in the mere achievement of feats of bodily skill :

> " The healthy boy," says Froebel, " brought up simply and naturally, never evades an obstacle, a difficulty ; nay, he seeks it, and overcomes it.
>
> " ' Let it lie,' the vigorous youngster exclaims to his father, who is about to roll a piece of wood out of the boy's way—' let it lie ; I can get over it.' With difficulty, indeed, the boy gets over it the first time ; but he has accomplished the feat by his own strength. Strength and courage have grown in him. He returns, gets over the obstacle a second time, and soon he learns to clear it easily. . . . Hence, the daring and venturesome feats of boyhood ; the explorations

[1] *Education : Its Data and First Principles*, p. 69.

of caves and ravines ; the climbing of trees and mountains ; the searching of the heights and depths ; the roaming through fields and forests. . . .

" To climb a new tree means to the boy the discovery of a new world. The outlook from above shows everything so different from the ordinary cramped and distorted side-view. How clear and distinct everything lies beneath him."[1]

Every healthy child feels a strong impulse towards experimenting with his bodily powers, and a hunger for the acquisition of curious pieces of technical skill. It is the motive upon which many systems of gymnastics are built.

Games of skill are elements in the child's progressive acquisition of control of himself or of his environment. Tennis, cricket, football, in as far as they are not work—which in modern days they so easily tend to become—are examples of this fact. As they were originally designed, a child played these games because he enjoyed them and not because he wished to win a particular trophy. It was Froebel who first laid emphasis upon the essential nature of adequate space and training in playgrounds for the development and discipline of these impulses, and who pointed out the rôle they take in the development of those qualities that he has observed to be useful in later life. He shows that this impulse to acquire the skill possessed by adults permeates child life :

" A two-year-old child of a carter," says Froebel, " accompanies his father and holds the horse's reins with him, firmly convinced that *he* leads the horse, and that it must obey him. A gardener's little son wishes to help his father to pull up weeds, and the father shows him how to distinguish plants by colour and scent. Another child sees his father hammering hot iron, and learns from him that the iron has been softened by the heat ; or again, when he sees his father vainly attempt to push the heated bar through a hole into which it entered easily when cold, he learns that the heat has expanded the iron."[2]

[1] *Education of Man*, pp. 102 and 104.
[2] *Froebel's Chief Writings on Education*, p. 60.

From time to time children attending the Institute experiment in the same way. For instance :

*E. H., Boy, aged 4.* (Father's hobby is carpentry.) He seized the bag of tools. Then he took them out one by one, asking if they were sharp. He then used the saw on pieces of wood.

*On another occasion.* He asked for tools, and especially the saw, and wanted to saw the handle of the hammer. He told worker to bend it, saying, " It is sharp, isn't it ? " He then tried to saw with the wrong edge, insisting that this would cut too.

*J. D., Boy, aged 7.* (Father a porter.) He wanted to dig and was given a fork, but he preferred a shovel. He is very muscular, and pulled the garden roller, lifted weights, picked up the great household box and carried it on his head in a most professional manner.

*On another occasion.* He showed real concentration and energy when asked to help to tidy the room. He carried boxes, chairs, and tables about, and, having asked where a chair should go, proceeded to put them all there, methodically stacked.

*On another occasion.* Again tidying the room, he carried all the trays of sand across the room and piled them. He also carried heavy boxes of bricks, one being heaved up and carried on his head in approved porter fashion.

*K. W., Boy, aged 11.* (Father a carpenter and decorator.) He went to the carpenter's bench and sawed pieces of wood, holding them down with his hand and sawing extremely fast, but well and truly. He measured up the pieces frequently and very carefully.

*P. T., Boy, aged 4.* (Father a motor salesman.) He was attracted by the transport toys, but not interested in people or animals. He built a garage of blocks, with planks for the roof. One floor was made specially for transport vehicles.

It is a healthy sign when a child emulates that which he has observed his parents carrying out, and he will put a great deal of energy into its accomplishment.

In Chapter IV we have seen how a child will work out the recapitulation of the sensory experiences that he has already enjoyed or suffered. In older children interest in the senses looks forward rather than backwards, and takes note of the manifold uses to which the senses can be put in adult life. A child becomes interested in them, surprised or amused or occasionally repelled by them, and proceeds to experiment on his own. Let us consider what he does.

*The use of the mouth* offers a fascinating field for experiment to the small child. To every child it is obvious that the mouth is used by grown-ups in many ways other than for eating, and he wishes to try out what these other movements feel like, and wherein lies their charm. Whistling, making cat-calls, singing, smoking, cheering, spitting, all form part of such experimental play. Examples :

*J. B., Boy, aged 6.* He grabbed a little girl's toys, and then spat at worker. He climbed a ladder, and, standing on the top, tried to dislodge a spider by spitting at it. Finally he hit it, shouted with joy, and tried again.

*F. V., Girl, aged 7.* When worker spoke to her while she was hammering, she resented it and called worker a liar. When offered help, she spat and rebelled. She came and scribbled over worker's notebook and seemed surprised that she was not corrected. After hitting and spitting, she said, " You don't like this place, do you ? "

*A. U., Boy, aged 10.* Four children were playing together at the Meccano table. When I came in to them, his attitude seemed to be antagonistic from the start. He spoke politely, but seemed to eye one hostilely. He was doing no work, but was leading a chorus of shrill railway whistling. He then took to whistling in the ears of two of the other children, and this led to a rough and tumble. He was given the Meccano book, but only turned it over and did not attempt to make

anything. He was taken off to do something else, and after a few minutes he made one attempt to attract the others' attention by a shrill whistle across the room. But they took no notice. He gave me the impression of being out to annoy.

*F. V., Girl, aged 7.* She sang at the top of her voice, and screamed and yelled at worker, giving orders, countermanding them, etc. She played with a jigsaw, and sang, or rather bawled, tunes—" The Soldiers' March " and " There was a Tailor had a Mouse "—but the whole time she used only the word " boo," with intermittent squawks.

Words to a small child, as we have already pointed out, do not play the same rôle as they do with the adult. They are not things of use and meaning ; they stand more for sound than for meaning, and experimentation with words is one of the child's ways of growing up. Children between five and seven years of age are very much puzzled as to the meaning of words, and will take up a single word for a period of time, using it on all occasions and in reference to all kinds of objects, in order to watch the reaction of the surrounding grown-ups. They will make up nonsense rhymes and chant them as they go, and enormously enjoy the sound of shouted words.

*E. C., Boy, aged 4.* On entering the playroom, chanted :

" *Here comes the boys' brigade,*
*All covered with marmalade.*"

*P. M., Boy, aged 5.* While playing with the " world " toys, he referred to the hippo as the " big try horse," and, when speaking of a " world " man, he said, " He's bad, because he shoots things. He shoots men and everything—he shoots chocolate bats." He often talks nonsense language which only he can understand. When asked if anyone else can understand it, he said, " Uncle Stanley." His nonsense words nearly always rhyme. The following are examples : " Big spanky bead bocky. Big bumping father. Mr. Big rude booby."

Another use of the mouth which fascinates children is its capacity to produce tastes. This interest is not universal, but it persistently appears in a certain number of children. They have noticed the variety of tastes the world can supply, and find the quality and taste of substances of endless interest, inventing numberless ingenious games to try them out. The following are examples :

*B. G., Boy, aged 9.* While blowing bubbles, he said it tasted like pineapple and was nice.

*On another occasion.* He told worker that he liked pudding, especially bread pudding. He always has a " whacking great helping." He also liked meat, because " when you cough after eating it, you taste it again."

*On another occasion.* He was biting his nails while reading. Worker enquired what it felt like, and he replied, " Oh, it tastes ever so good."

*P. T., Boy, aged 4.* While playing with the mincer, he first began mincing, then he took it to pieces and screwed it up. He cut plasticine into strips to feed it. His interest then passed to cutting the plasticine into ever thinner strips, and at times he handed bits to worker to bite, asking, " Does it taste nasty ? " He was thrilled by this, but did not dare to bite it himself.

Stanley Hall quotes some interesting examples of children experimenting with the use of the mouth :

" F., 4. Wanted to taste horseradish, and, being refused, tasted it when her mother's back was turned.

" F., 4. Was very curious about a box of paris green and narrowly escaped poisoning.

" F., 4, and M., $4\frac{1}{2}$. Tasted grafting wax but did not like the flavour.

" F., 4. Ate a raw potato to see how it tasted.

" M., 6, and F., 8. My sister and I used to mix up snow and milk and juices to make new drinks.

" F., 6. Ate green grapes to see if they would really make her sick, as she had been told.

" M., 6. Tasted Tabasco sauce, although he had been warned of the effect."[1]

A variety of this interest in taste is the boys' and girls' interest in substitutes for cigarettes. Stanley Hall writes:

" Mr. Bell gives a list of seventy-one different substances tested as to their smoking qualities by boys and girls of these ages. Bark of various kinds, spices, seeds, leaves, stems, rattan, cork—in fact, almost anything that could be smoked and was easily procurable—is to be found in this list. While it is undoubtedly true that imitation plays a large part in this smoking craze, its root lies in the natural desire of growing children to test new sensations for themselves, and even the unpleasant results consequent upon some of the trials do not prevent further experimentation along the same line."[2]

*Visual experiments* are more rare, but every child at one time or another bandages its eyes and plays games with itself or with its friends, to investigate the meaning of sight—no sight, pressing eyeballs to see " stars," squinting, shutting alternate eyes. Experiments with colour selection comes under this head. The following are examples of children showing interest in visual effects:

*B. H., Girl, aged 8.* She saw another girl painting wood in a dirty yellow colour. She said she disliked the colour intensely, but wanted to paint wood. The only other colour available at the time was blue. She tired of using this, and decided that she liked the yellow better after all. On another day she used orange, put on very thickly, and remarked that " it looks like chalk when it is dry."

[1] *Aspects of Child Life and Education*, p. 101. [2] Ibid., p. 102.

*D. D., Girl, aged 10.* When making a picture with Čizek material she chose rather sombre colours with a certain tastefulness.

*D. J., Girl, aged 11.* Using " concentration " toy, she made a flowing design, then took it to pieces and arranged the material in long rows of uniform colours side by side. She expressed decided preference for blue and less marked liking for green.

*B. C., Girl, aged 10.* When cutting out and sticking pictures into a book, she showed marked preference for blue, which is associated with blue dress, shoes, stockings, coat, hat. " My sister made the blue dress I've got. Blue for beauty." Worker asked, " What do you see that is blue ? " and she replied, " The sky is blue, but I never look at it."

*Experiments with smell* also occur, but are difficult to illustrate. These examples show a dislike of certain smells :

*M. R., Girl, aged 11.* Another girl had found a scent-bottle and insisted upon sprinkling the scent on her clothes and toys. She said that she disliked scent and grimaced in disgust.

*B. C., Girl, aged 10.* She expressed sharp dislike of the smell of gum. Worker tried hard to suggest things it was like, but failed. The following afternoon the discussion of the smell of glue was resumed.[1]

Next we come to experimentation with external objects. On page 209, we have referred to an example given by Froebel of the child's delight in overcoming obstacles, and even creating them in order to overcome them.

Children when left to themselves will spontaneously set themselves constructive tasks of ever-increasing difficulty, and will show an almost incredible power of absorption in these

[1] During the discussion following this lecture a member of the audience quoted girls of eleven to twelve known to show great interest in smelling different herbs in a garden and comparing their scents.

tasks, and a patience in the steady overcoming of difficulties which often exceeds anything ever again realised in later life.

Charlotte Bühler has brought out a very important point in regard to this relationship between the child and its material :

> "The child progresses in this development from the primitive forms of pleasure in activity," she writes, "to pleasure in creation, a specifically human pleasure experience which first appears with the construction of an object. In contrast to the pleasure of activity, in which we pour forth our energy in movements, we have in the pleasure of creation the characteristic satisfaction of transferring our energy to the material, and of impressing upon it the stamp of our individuality. We generally express this by saying that we express ourselves in the material. And in this expression of ourselves we expand beyond our limits and leave a more or less permanent impression of ourselves in the material. With this are connected three important experiences characteristic of mankind . . . : while he is active with the material, man surrenders himself to it, masters it, and puts something new into the world. Surrendering one's self, mastering the material, and producing an object are, one may say, such definitely human experiences that without them one is not human. These experiences . . . have normally fallen to the lot of the six-year-old child."[1]

Without such a surrendering, and the capacity to make such a surrender, normal emotional and character growth cannot take place. Children, deprived of adequate opportunities of constructive play, are children who later grow up deficient in constructive imagination, and are inhibited in experience.

Charlotte Bühler is of the opinion that the passage from the use of material as an instrument for phantasy to the use of even the same material for construction, is a definite stage in maturation. While the age-limits she suggests and the fixity of the lines she draws cannot be entirely accepted as universally applicable, it is without doubt that a desire to construct makes its appearance in all healthy children at a definite

[1] *The Child and its Activity with Practical Material*, pp. 27–41.

period. Constructive play is a constant feature of work in the Institute playroom, and the constructive material has heavy demands made upon it by children of all ages. Here are a few records :

*E. H., Boy, aged* $3\frac{3}{4}$. He wanted to make " a push-chair for my baby." He examined the basket of tools, and took out the saw and used it. He then looked for the pincers and for a " thing like my dad has " (plane). He picked up a large hammer and held it for a few moments, then threw it down and returned to his small one. He continued his work more and more independently ; at first it was, " You do it ; you hold it," but later he pushed worker's hand away, saying, " I'll do it."

*On another occasion.* He said, " Let's make a ladder what a man can go up. You do it." Worker showed him how to put the pieces together, and began the ladder. He snatched it away and with a chuckle pushed the rungs apart. Then he pulled it to pieces and put it away. He asked what was in the various boxes, and finally accepted the component parts of an airship. He began working on this, and was absorbed, but asked continually, " Is it finished ? " Before completion, it was rejected in favour of an aeroplane and a ship of painted wood. He was interested in fitting pieces together, but did not attempt to make anything, nor did the pictures of the completed models interest him. He specially liked the funnel. He then passed on to very simple " motor " construction. This he completed with a good deal of help, and showed great satisfaction. He wanted to show it to his mother. In working at this, he was very quick in picking up and adopting information given in answer to his questions.

*A. J., Boy, aged 7.* He asked for the match-box construction game, and began to make a train, working very steadily at it, but choosing on the whole the easier parts of the construction. It was amusing to note that although he insisted upon worker doing all the difficult parts, he continually stated to her in question form, " I did do it all, didn't I ? "

*J. W., Boy, aged 14.* He wanted to build something, and, after surveying all the printed construction plans, slowly chose a crane. He seemed loth to have a plan dictated to him, but at the same time unaccustomed to the idea of choosing one himself. Save for one detail, his design followed the printed plan. At one point he asked worker, " Is that right ? "

*On another occasion.* On arrival he asked, " Can I finish the thing I started last time ? " We found the crane and he settled down. He was very silent, and worked hard and intelligently. He asked once if the model was going all right, and from time to time tested the crane, and was worried to find it rickety. When it was finished, he wanted something heavy to tie on to it for it to lift.

*I. K., Boy, aged 13.* He looked through the constructive play materials, and found the model of a motor-car which consisted of only a few pieces, and was fairly easy. He said, " I don't want this sort of thing. This is already done for you ; there is nothing left for you to do." He then became interested in a fire-engine model and decided to do it. Before even beginning work, he discovered that pieces were lacking. Worker found substitutes and he then started to work. He looked at the picture of the model and said that he did not want to copy it. He liked to make something of his own, or to improve on the model. Later he remarked, " Actually I mean to say I am almost certain to improve on the model." He fastened two wheels on an iron rod, and then discovered that the model engine was out of proportion and made an elaborate proof of this statement, and went on to talk of proportions generally.

*Handcraft.* The function which construction fulfils for boys is fulfilled for girls in the main by handcraft. But this division is not in any way absolute. The fascination of punching needles through cards, and the permanence of the pattern that can be left ; the fun of altering the appearance of a doll by changing its dress ; and the delight of beadwork, are fascinations that are felt equally by boys and girls at an early age, and many

more boys than the few who do would retain, and would exercise, if custom permitted it, this same interest in later life. Here are examples of girls' interest in handcraft :

*D. S., Girl, aged 12.* I helped her remove from the loom the bead square she had finished weaving and prepare the purse it was to decorate. When she had finished this purse, she appeared decidedly happier than before, showing more easiness and spontaneity in her attitude to work, children, and workers, and making better contact with them. She was obviously pleased with having done her weaving well, and started gleefully swinging by supporting herself between the chair and the table.

*I. S., Girl, aged 9.* She was cutting out pictures and pasting, and worker asked if she would like to make a Christmas card for her mother. She was very pleased with the idea, but thought a calendar would be nicer. She was very enthusiastic over her work, and demanded that others should see it and appreciate it.

*M. E., Girl, aged 14.* She was sewing a plain yellow line, and several times undid several parts of it, stitching backwards, as there were mistakes. Having finished her yellow row, she began another row in blue, carefully showing me the colour. I had to prepare new threads, etc., for her, and she refused to take a thread again, once it had been pulled out. She asked for permission to take her handwork home, as she wanted to " finish all this."

*On another occasion.* I showed her the embroidery I had started with another girl, and she decided to finish this, each of us to do one end, and it was to be a competition of speed. The attitude of " mother and child " game was deliberately chosen, and she forbade me to speak until I had finished my work. When both our pieces of work were finished, she asked if she might take them home.

Handcraft has for girls naturally a technical side, and a side that is not play, but lies in the region of work. Where the little boy is interested in the tools of the trade exercised by his father, the little girl makes beds, mixes dough, sews dolls' clothes, not this time to release her energy or to " take her mother off," but in order to acquire the kind of skill that mummy has.

In small children play with the materials of domestic life is recapitulatory play, phantasy play, or sense experiment ; in adults, it is work or artistic creation. In the girl of junior and middle school age there should come, if her development in this side of her nature is going to follow the lines of natural growth, a period of contact with the raw materials of her future domestic occupations, in the form of play and not work. This play is preparation for life, in the sense that the achievements the child has seen brought about in adult life are actually attempted and studied, but the relative emphasis which is put upon achievement or experiment should be left entirely to her own initiative. That is to say, she should be allowed to cook with the cook, or in cookery classes, making *play* cookery of her own and copying the actions of the cook as best as she can, but being allowed to break off now and then to elaborate the games suggested by the chance shape of the piece of rolled pastry, or the position of two currants as the eyes of a monster. In the end she will produce perhaps one cake which is near enough to the real thing to be accepted by the cook, to the great delight of the child, and put among her own productions. It may be objected that to allow a child to do this is merely to allow her to waste materials, but the answer is that if children are given the chance to become familiar for themselves, in their own way, with the natural qualities of the materials used, for example, in cookery, they will bring ultimately to the learning of actual cookery the same zest and interest that they bring to their play.

Play with iron, steel, and oil in the garage, in the shipbuilders' yard, in the fisheries, in the carpenter's shop, in the piggeries and the stables of the farm perform for the boy the same function as this type of domestic play performs for the girl. Such play eases the junction between childhood and maturity ; softens the passage from fantastic living to living

in contact with reality ; and, if successful in fortunate circumstances, children brought up in this way carry over into the mature, skilful constructive ability of the grown man and woman something of the imaginative and creative power of the child. Here are examples of the kind of play that is meant :

*G. S., Girl, aged 8.* She went to play with dough, and put flour into three basins and then added water to each. At first she made firm pies, then sloshier ones, and one that became accidentally pink she made more so with chalk and called it tomato soup. She added handfuls of fine sand, calling it salt. She then made another large basin of sand and water, and thought worker stupid because she did not recognise it as coffee.

*L. F., Girl, aged 8.* Playing with house material, she put " potatoes " on to boil. Then she put a kettle of water on to boil and went to the lavatory, telling worker to take the kettle off when it boiled. On her return she accused worker of taking some of the water and not leaving her enough for a cup of tea.

*A. J., Boy, aged 5.* (Father a blacksmith.) He spent some time hammering nails into wood, and showed a remarkable skill with the hammer, hitting nails well on the head in a masterly fashion. If one was driven in crooked, he hit it on the side to straighten it.

*Games of Risk.* Here appears a very important element in life. Risk and danger are a normal element of adult life, and the ability to cope with dangerous situations is a mark of successful adult character. Every child has a hunger to emulate in this way the adults who surround him, and every child, if left to itself, will create games in which the element of risk appears.

In his section of " Direct Physical Fighting Play,"[1] Groos describes children provoking or inviting one another to fight :

[1] *Play of Man*, pp. 101–3.

" So far as my observation goes in this little investigated sphere, very small boys seldom stand for their combats. Usually one already seated seizes his comrade, who may be standing near, by the foot, pulls him down, and they fight, rolling over on the floor, and each seeking to keep the upper hand. The effort is constantly made to keep the enemy's head down, a position so distasteful to the party concerned that the scene threatens to end in noisy and serious strife. . . . Usually the fight ends at this point, but sometimes the tussling is continued on the ground, as described, and the playful character is very apt to be lost. . . . The enjoyment is doubled when it becomes not only a question of hitting the enemy, but of dodging his missiles as well."[1]

Groos clearly shows that he recognises the desire to take risks or to provoke them, if they are absent, although he does not appear to have attached a great importance to the desire to take risks *per se*. This universal desire is shown in the play at the I.C.P. :

*J. B., Boy, aged 7.* While in the garden he climbed the fig-tree and picked the small green figs. Then he found a pile of twigs near a tree. He climbed up these and stood on the wall, looking on to the roof of the staff cloakroom. He asked if he might climb on the roof, but worker said it would be very disturbing to people inside, so he agreed to come down. He climbed the fig-tree again, and was delighted to see people watching from the parents' room. He hoped " mum " was there ; " she wouldn't half be frightened."

*E. R., Boy, aged 11.* He climbed up the flag-staff at the end of the garden, and found a rope down which he climbed. Then, seeing a metal wire, he said, " I'm going to walk the rope."

He lassoed worker, and plants, sticks, etc.

This element in children's nature forms one of the most serious obstacles to the achievement of safety for children in modern streets and roads. There is a game of " Last Across,"

[1] *Play of Man*, p. 175.

which has always had a fascination for children. This could be played with reasonable safety while the traffic consisted of horses and carts—it is rare for a horse to tread on a human being—but lorries have no such sensibility. Moreover, a small child has a besetting difficulty in distinguishing animate from inanimate objects, and particularly in relation to movement, and finds it impossible to appreciate the deadliness of moving lorries.

Contributory to this delight is that of boarding moving objects. The boarding of a moving vehicle holds an irresistible attraction for every unsophisticated boy. To mount up beside the milkman, to ride in the lorry, or to be taken up beside the driver of a heavy commercial vehicle, is an achievement beside which all risks pale into insignificance. From the days of Buffalo Bill to the present day there remains this powerful impulse in healthy childhood, and it is an impulse which, if it does not succeed in gaining reasonable scope, or if it is unduly inhibited by fear, tends to weaken the spirit of enterprise throughout the child's character. On this impulse the Boy Scout movement, the Sea Scouts, the success of boys' and girls' camps, and of Alpine parties for boys and girls are largely based.

The thrill which underlies games in which risk is involved is very closely associated with the emotions of suspense and fear. Many children intensely enjoy games envolving a certain moderate element of fear. As, for example :

> " A little girl of seven related in a very animated manner that she and her sister loved to feel frightened. ' We love to play with the fire ; it may burn us—but we don't care ; we love to be frightened. We love to swing high in the swing —it frightens us—we love it.' "[1]

Also the recollection of a friend whose childhood was spent in Spain :

> " We used to love to bathe in a pool that was set out of bounds by our parents' command. We would dip our feet in the pool, and swing down on the branches and get wet,

[1] Privately contributed.

fearful and delighted by the excitement and fear that our disobedience produced, not, I may say, by the chance of any activity on the part of the alligators that infested the pool."[1]

Instances of this kind have been noted by many observers of children. It is as if the child were testing the lengths to which its endurance of the pleasurable qualities inherent in fear would go, and testing out its own capacities for sensation. This joy continues throughout adult life, and reappears in adult delight in gangster films and thriller plays and books. The creation of situations containing strong emotion in a safe atmosphere, where the player knows beforehand that no real disaster can happen, is one of the most permanent elements of the play sense of mankind.

Closely akin to the joy in taking physical risk is the delight most healthy children feel in the exercise of mental agility. Roughly around the age of ten years, energy begins to pour into mental processes, and the healthy child, finding school work an insufficient outlet for its energy, invents mental tests and trials of skill of his own.

Into this group come guessing games, riddles, arithmetic games, games of observation, and games played with paper and pencil.

Groos, unfortunately, in his section on mental plays[2] gives very few examples of children's experiments with their mental faculties, but does, in the following extract, describe a self-devised guessing game of a very small child :

> " Marie G., who from the time she was two years old had a veritable passion for having things drawn for her, considered it a great joke when she could not make out what was meant without some effort."[3]

In the I.C.P. from time to time during their stay, and at the end of their period of attendance, when the children are gaining some freedom from the tyranny of their own

[1] Privately contributed. [2] *Play of Man*, pp. 121–172. [3] Ibid., p. 125.

emotional problems, they invent games of experiment with their mental powers. For example :

*A. M., Boy, aged 13.* He made out and exhibited with pride a code which he said he used in his classroom with a friend who sits behind him.

*B. G., Boy, aged 11.* He wanted to write something for the sake of writing, but did not know what to do. He decided to write out the capitals of Europe, saying that in school you could not take so much care and time.

*M.B., Girl, aged 12.* She suggested making words from a long word, and agreed to use the word " incompatibility."

*G.W., Girl, aged 12.* She suggested a title for the story we were both to write, i.e., " A Terrible Disaster."

G. W. : " I will give you marks and you shall give me marks. Of course, yours will be best."

Worker : " But I can't spell, and spelling faults take off marks."

G. W. : " I can spell and I shall count every fault against you."

*On another occasion.* She asked to do spelling, and worker had to select long words as a test of her spelling ability.

*On yet another occasion.* She was looking for " difficult words " and was very scornful at worker's failure to find words she did not know. She stumbled occasionally, but only in the case of words that were not likely to be familiar to her.[1]

This interest passes on later into crossword puzzles and the interest which is so widespread in complicated detective fiction.

It is an interesting fact to note how the children of artists experiment in painting, the children of mathematicians either

[1] During the discussion following this lecture a member of the audience quoted the desire to do long sums at seven years and to add them up, and the joy in juggling with figures.

hate or take premature interest in mathematical problems, and how the children of writers fill countless copybooks with stories and plays of their own. " All work without play makes Jack a dull boy," and the modern educationalist has come to see that the elimination of play from education greatly lessens a child's capacity to learn, and that play itself is a valuable and indispensable vehicle of learning.[1]

" No candid observer," says Sir Percy Nunn, " can doubt that school teaching would be immensely more efficient if teachers could learn to exploit the intellectual energy released so abundantly in play."[2]

[1] See *The Play Way*, by H. Caldwell Cook.
[2] *Education : Its Data and First Principles*, p. 86.

# CHAPTER XI

# CONCLUSION

PLAY IS to a child, therefore, work, thought, art, and relaxation, and cannot be pressed into any single formula. It expresses a child's relation to himself and his environment, and, without adequate opportunity for play, normal and satisfactory emotional development is not possible.

Moreover if the contention put forward on pages 160–161 is tenable, and if the author is correct in this view of play as an essential function of the passage from immaturity to emotional maturity, then any individual in whose early life these necessary opportunities for adequate play have been lacking will inevitably go on seeking them in the stuff of adult life.

Though he must do this, he will be unaware of what he is seeking. Emotional satisfactions, which the mind has missed at the period to which they properly belong, do not present themselves later in the same form. The forces of destruction, aggression, and hostile emotion, which form so powerful an element for good or evil in human character, can display themselves fully in the play of childhood, and become through

this expression integrated into the controlled and conscious personality. Forces unrealised in childhood remain as an inner drive for ever seeking outlet, and lead men to express them not any longer in play, since this is regarded as an activity of childhood, but in industrial competition, anarchy, and war.

The less a man or a child is aware of the interior forces of his mind, the more irresistibly is he driven to express them. We have seen how fantastic is the content of much of this interior life of the mind in children : in another volume the author hopes to show how real is the logic that underlies this phantasy. The nature of this logic is, however, at utter variance with the logic of the conscious mind, and man's disharmony with himself is due to the fact that he is unaware of this situation ; that, once childhood is over, he takes his games for reality, his fantastic conceptions of the world for political sanity, and his momentary myths for considered thought.