

Thus the evolution of play, which continually interferes with that of imitation and representation in general, makes it possible to differentiate between the various types of symbols, from those which by their mechanism of mere egocentric assimilation are farthest removed from "signs," to those which, by the accommodating and assimilating character of their representation, converge on the conceptual sign, though without being identified with it.

## CHAPTER IV

### THE BEGINNINGS OF PLAY

PLAY in its initial stages being merely the pole of the behaviours defined by assimilation, almost all the behaviours we studied in relation to intelligence (*M.I.* and *C.R.*) are susceptible of becoming play as soon as they are repeated for mere assimilation, *i.e.*, purely for functional pleasure.

Just as accommodation continually spreads beyond the framework of adaptation, so also does assimilation, and the reason for this is simple. Schemas temporarily out of use cannot just disappear, threatened with atrophy for lack of use, but will become active for their own sake, for no other end than the functional pleasure of use. Such is play in its beginnings, the converse and complement of imitation. Imitation makes use of the schemas when these are adjustable to a model which corresponds with habitual activities, or when they can be differentiated by comparison with models which though new are related to these activities. Imitation is therefore, or at least becomes, a kind of hyperadaptation, through accommodation to models which are virtually though not actually usable. Play, on the contrary, proceeds by relaxation of the effort at adaptation and by maintenance or exercise of activities for the mere pleasure of mastering them and acquiring thereby a feeling of virtuosity or power. Imitation and play will of course combine, but only at the level of representation, and will become the set of what might be called "inactive" adaptations, in contrast to intelligence in action. During the sensory-motor stages, they are separate, even to some extent antithetic, and therefore they must be studied separately.

When does play begin? The question arises at the *first stage*, that of purely reflex adaptations. For an interpretation of play like that of K. Groos, for whom play is pre-exercise of essential instincts, the origin of play must be found in this initial stage since sucking gives rise to exercises in the void, apart from meals (*M.I.*, Chap. I, § 2). But it seems very difficult to consider reflex exercises as real games when they merely continue the pleasure of feeding-time and consolidate the functioning of the hereditary set-up, thus being evidence of real adaptation.

During the *second stage*, on the other hand, play already seems to assume part of the adaptive behaviours, but the continuity between it and them is such that it would be difficult to say where it begins,

and this question of boundary raises a problem which concerns the whole interpretation of later play. "Games" with the voice at the time of the first lullations, movements of the head and hands accompanied by smiles and pleasure, are these already part of play, or do they belong to a different order? Are "primary circular reactions" generally speaking ludic, adaptive, or both? If we merely apply the classical criteria, from the "pre-exercise" of Groos to the "disinterested" (or as Baldwin calls it) the "autotelic" character of play, we should have to say (and Claparède went almost so far) that everything during the first months of life, except feeding and emotions like fear and anger, is play. Indeed, when the child looks for the sake of looking, handles for the sake of handling, moves his arms and hands (and in the next stage shakes hanging objects and his toys) he is doing actions which are an end in themselves, as are all practice games, and which do not form part of any series of actions imposed by someone else or from outside. They no more have an external aim than the later motor exercises such as throwing stones into a pond, making water spirt from a tap, jumping, and so on, which are always considered to be games. But all autotelic activities are certainly not games. Science has this characteristic, and particularly pure mathematics, whose object is immanent in thought itself, but if it is compared to a "superior" game, it is clear that it differs from a mere game by its forced adaptation to an internal or external reality. In a general way, all adaptation is autotelic, but a distinction must be made between assimilation with actual accommodation and pure assimilation or assimilation which subordinates to itself earlier accommodations and assimilates the real to the activity itself without effort or limitation. Only the latter seems to be characteristic of play; otherwise the attempt to identify play with "pre-exercise" in general would involve the inclusion in it of practically all the child's activity.

But although the circular reactions have not in themselves this ludic character, it can be said that most of them are continued as games. We find, indeed, though naturally without being able to trace any definite boundary, that the child, after showing by his seriousness that he is making a real effort at accommodation, later reproduces these behaviours merely for pleasure, accompanied by smiles and even laughter, and without the expectation of results characteristic of the circular reactions through which the child learns. It can be maintained that at this stage the reaction ceases to be an act of complete adaptation and merely gives rise to the pleasure of pure assimilation, assimilation which is simply functional: the "Funktionslust" of K. Bühler. Of course, the schemas due to circular reaction do not only result in games. Once acquired, they may equally well become parts of more complete adaptations. In other words, a schema is never essentially ludic or non-ludic, and its

character as play depends on its context and on its actual functioning. But all schemas are capable of giving rise to pure assimilation, whose extreme form is play. The phenomenon is clear in the case of schemas such as those of phonation, prehension (watching moving fingers, etc.) and certain visual schemas (looking at things upside down, etc.).

obs. 59. It will be remembered that T., at 0; 2 (21), adopted the habit of throwing his head back to look at familiar things from this new position (see *N.I.*, obs. 36). At 0; 2 (23 or 24) he seemed to repeat this movement with ever-increasing enjoyment and ever-decreasing interest in the external result: he brought his head back to the upright position and then threw it back again time after time, laughing loudly. In other words, the circular reaction ceased to be "serious" or instructive, if such expressions can be applied to a baby of less than three months, and became a game.

At 0; 3 T. played with his voice, not only through interest in the sound, but for "functional pleasure," laughing at his own power.

At 0; 2 (19 and 20) he smiled at his hands and at 0; 2 (25) at objects that he shook with his hand, while at other times he gazed at them with deep seriousness.

In short, during this second stage, play only appears as yet as a slight differentiation from adaptive assimilation. It is only in virtue of its later development that we can speak of two distinct facts. But the later evolution of play enables us to note the duality even at this stage, just as the evolution of imitation compels us to see the birth of imitation in the self-imitation of the circular reaction.

During the *third stage*, that of secondary circular reactions, the process remains the same, but the differentiation between play and intellectual assimilation is rather more advanced. Indeed, as soon as the circular reactions no longer involve only the child's own body or the perceptive canvas of elementary sensorial activity, but also objects manipulated with increasing deliberation, the "pleasure of being the cause" emphasised by K. Groos is added to the mere "functional pleasure" of K. Bühler. The action on things, which begins with each new secondary reaction, in a context of objective interest and intentional accommodation, often even of anxiety (as when the child sways new hanging objects or shakes new toys which produce sound) will thus unfailingly become a game as soon as the new phenomenon is grasped by the child and offers no further scope for investigation properly so called.

obs. 60. One need only re-read obs. 94-104 of the volume *N.I.* to find all the examples needed of the transition from assimilation proper to secondary reactions, to the pure assimilation which

characters play properly so called. For example, in obs. 94, L. discovered the possibility of making objects hanging from the top of her cot swing. At first, between 0 ; 3 (6) and 0 ; 3 (16), she studied the phenomenon without smiling, or smiling only a little, but with an appearance of intense interest, as though she was studying it. Subsequently, however, from about 0 ; 4, she never indulged in this activity, which lasted up to about 0 ; 8 and even beyond, without a show of great joy and power. In other words assimilation was no longer accompanied by accommodation and therefore was no longer an effort at comprehension: there was merely assimilation to the activity itself, *i.e.*, use of the phenomenon for the pleasure of the activity, and that is play.

These observations might be repeated in the case of each of the secondary reactions. But it is more curious to note that even the "procedures for prolonging an interesting spectacle," *i.e.*, the behaviours resulting from a generalisation of the secondary schemas (*N.I.*, obs. 110-118) give rise to an activity which is real play. Movements such as drawing oneself up so as not to lose a visual picture or a sound, carried out at first with great seriousness and almost with anxiety as to the result, are subsequently used on all occasions and almost "for fun." When the procedure is successful, the child uses it with the same "pleasure of being the cause" as in simple circular reactions, and moreover, even when the child himself sees it to be unsuccessful, he ends by repeating the movement without expecting anything from it, merely for amusement. This action must not be confused with the sensory-motor gestures of recognition, of which we spoke earlier (*N.I.*, obs. 107): the attitude of the child shows whether he is playing or striving to recognise the object.

During the *fourth stage* that of co-ordination of the secondary schemas, two new elements related to play make their appearance. Firstly, the behaviours most characteristic of this period, or "the application of known schemas to new situations" (see *N.I.*, obs. 120-130) are capable, like the earlier ones, of being continued in ludic manifestations in so far as they are carried out for mere assimilation, *i.e.*, for the pleasure of the activity and without any effort at adaptation to achieve a definite end.

Obs. 61. At 0 ; 7 (13), after learning to remove an obstacle to gain his objective, T. began to enjoy this kind of exercise. When several times in succession I put my hand or a piece of cardboard between him and the toy he desired, he reached the stage of momentarily forgetting the toy and pushed aside the obstacle, bursting into laughter. What had been intelligent adaptation had thus become play, through transfer of interest to the action itself, regardless of its aim.

Secondly, the mobility of the schemas (see *N.I.* 5, etc.) allows of the formation of real ludic combinations, the child going from one

schema to another, no longer to try them out successively but merely to master them, without any effort at adaptation.

Obs. 62. At 0 ; 9 (3) J. was sitting in her cot and I hung her celluloid duck above her. She pulled a string hanging from the top of the cot and in this way shook the duck for a moment, laughing. Her involuntary movements left an impression on her eiderdown: she then forgot the duck, pulled the eiderdown towards her and moved the whole of it with her feet and arms. As the top of the cot was also being shaken, she looked at it, stretched up then fell back heavily, shaking the whole cot. After doing this some ten times, J. again noticed her duck: she then grasped a doll also hanging from the top of the cot and went on shaking it, which made the duck swing. Then noticing the movement of her hands she let everything go, so as to clasp and shake them (continuing the preceding movement). Then she pulled her pillow from under her head, and having shaken it, struck it hard and struck the sides of the cot and the doll with it. As she was holding the pillow, she noticed the fringe, which she began to suck. This action, which reminded her of what she did every day before going to sleep, caused her to lie down on her side, in the position for sleep, holding a corner of the fringe and sucking her thumb. This, however, did not last for half a minute and J. resumed her earlier activity.

A comparison between this sequence of behaviours and that of obs. 136 of *N.I.* at once makes plain the difference between play and strictly intelligent activity. In the case of the schemas successively tried out with new objects (obs. 136) J. merely sought to assimilate the objects, and, as it were, to "define them by use." Since there was adaptation of the schemas to an external reality which constituted a problem, there was intelligence properly so called. In the present case, on the contrary, although the process is the same, the schemas follow one after the other without any external aim. The objects to which they are applied are no longer a problem, but merely serve as an opportunity for activity. This activity is no longer an effort to learn, it is only a happy display of known actions.

But there is more in such behaviours than a mere sequence of aimless combinations with no attempt at accommodation. There is what might be called a "ritualisation" of the schemas, which, no longer in their adaptive context, are as it were imitated or "played" plastically. It is specially worth noting how J. goes through the ritual of all the actions she usually does when she is about to go to sleep (lies down, sucks her thumb, holds the fringe), merely because this schema is evoked by the circumstances. It is clear that this "ritualisation" is a preparation for symbolic games. All that is needed for the ludic ritual to become a symbol is that the child, instead of merely following the cycle of his habitual movements, should be aware of the make-

believe, *i.e.*, that he should "pretend" to sleep. In the sixth stage, we shall find just this.

During the *fifth stage* certain new elements will ensure the transition from the behaviours of stage IV to the ludic symbol of stage VI, and for that very reason will accentuate the ritualisation we have just noted. In relation to the "tertiary circular reactions" or "experiments in order to see the result," it often happens that by chance, the child combines unrelated gestures without really trying to experiment, and subsequently repeats these gestures as a ritual and makes a motor game of them. But, in contrast to the combinations of stage IV, which are borrowed from the adapted schemas, these combinations are new and almost immediately have the character of play.

obs. 63. At 0;10 (3) J. put her nose close to her mother's cheek and then pressed it against it, which forced her to breathe much more loudly. This phenomenon at once interested her, but instead of merely repeating it or varying it so as to investigate it, she quickly complicated it for the fun of it: she drew back an inch or two, screwed up her nose, sniffed and breathed out alternately very hard (as if she were blowing her nose), then again thrust her nose against her mother's cheek, laughing heartily. These actions were repeated at least once a day for more than a month, as a ritual.

At 1;0 (5) she was holding her hair with her right hand during her bath. The hand, which was wet, slipped and struck the water. J. immediately repeated the action, first carefully putting her hand on her hair then quickly bringing it down on to the water. She varied the height and position, and one might have thought it was a tertiary circular reaction but for the fact that the child's attitude showed that it was merely a question of ludic combinations. On the following days, every time she was bathed, the game was repeated with the regularity of a ritual. For instance, at 1;0 (11) she struck the water as soon as she was in the bath, but stopped as if something was missing; she then put her hands up to her hair and found her game again.

At 1;3 (19), with one hand, she put a pin as far away as possible and picked it up with the other. This behaviour, related to the working out of spatial groups, became a ritual game, started by the mere sight of the pin. Similarly, at 1;4 (0), she had her leg through the handle of a basket. She pulled it out, put it back at once and examined the position. But once the geometrical interest was exhausted, the schema became one of play and gave rise to a series of combinations during which J. took the liveliest pleasure in using her new power.

At 1;3 (11) J. asked for her pot and laughed a lot when it was given to her. She indulged in a certain number of ritual movements, playfully, and the game stopped there, to be taken up again the following days.

At 1;1 (21) she amused herself by making an orange skin on a table sway from side to side. But as she had looked under the skin just before setting it in motion, she did it again as a ritual, at least twenty times; she took the peel, turned it over, put it down again, made it sway and then began all over again.

These behaviours are curious in that they are combinations not adapted to external circumstances. Obviously there is no necessity to screw up one's nose before wiping it on mother's cheek, to touch one's hair before hitting the water, or to look under a piece of orange peel (already well known) before making it move to and fro. But does the connection seem necessary to the child? We do not think so, although later on similar rituals may be accompanied by a certain feeling of efficacy, under the influence of emotion (as we are familiar with it in the game of avoiding walking on the lines between the stones in the pavement). In the present case, there is only adaptation at the starting point of such behaviours, secondary or tertiary circular reactions. But while in the normal circular reaction the child tends to repeat or vary the phenomenon, the better to adjust himself to it and master it, in this case the child complicates the situation and then repeats exactly all the actions, whether useful or useless, for the mere pleasure of using his activity as completely as possible. In short, during this stage, as before, play is seen to be the function of assimilation extended beyond the limits of adaptation.

The rituals of this stage are then a continuation of those of the previous one, with the difference that those of stage IV consist merely in repeating and combining schemas already established for a non-ludic end, while at this stage they become games almost immediately, and show a greater variety of combinations (a variety due no doubt to the habits following tertiary circular reaction). This progress in ludic ritualisation of schemas entails a corresponding development towards symbolism. Indeed, in so far as the ritual includes "serious" schemas or elements borrowed from such schemas (like the action of wiping one's nose, of asking for a pot, etc.), its effect is to abstract them from their context and consequently to evoke them symbolically. Of course, in such behaviours there is not necessarily as yet the consciousness of "make-believe," since the child confines himself to reproducing the schemas as they stand, without applying them symbolically to new objects. But although what occurs may not be symbolic representation, it is already almost the symbol in action.

With the *sixth stage*, owing to definite progress in the direction of representation, the ludic symbol is dissociated from ritual and takes the form of symbolic schemas. This progress is achieved when empirical intelligence becomes mental association, and external imitation becomes internal or "deferred" imitation, and this at once raises a whole set of problems. Here are some examples:

obs. 64 (a). In the case of J., who has been our main example in the preceding observations, the true ludic symbol, with every appearance of awareness of "make-believe", first appeared at 1;3 (12) in the following circumstances. She saw a cloth whose fringed edges vaguely recalled those of her pillow; she seized it, held a fold of it in her right hand, sucked the thumb of the same hand and lay down on her side, laughing hard. She kept her eyes open, but blinked from time to time as if she were alluding to closed eyes. Finally, laughing more and more, she cried "Néné" (Nono). The same cloth started the same game on the following days. At 1;3 (13) she treated the collar of her mother's coat in the same way. At 1;3 (30) it was the tail of her rubber donkey which represented the pillow! And from 1;5 onwards she made her animals, a bear and a plush dog also do "nono."

Similarly, at 1;6 (28) she said "avon" (savon = soap), rubbing her hands together and pretending to wash them (without any water).

At 1;8 (15) and the following days she pretended she was eating various things, e.g., a piece of paper, saying "Very nice."

obs. 64 (b). The development of these symbols which involve representation does not, of course, exclude that of purely sensory-motor rituals. Thus J., at 1;6 (19), went the round of a balcony hitting the railings at each step with a rhythmical movement, stopping and starting again; a step, a pause; a blow, a step, a pause; a blow, etc.

Frequent relationships are formed between rituals and symbolism, the latter arising from the former as a result of progressive abstraction of the action. For instance, at about 1;3 J. learnt to balance on a curved piece of wood which she rocked with her feet, in a standing position. But at 1;4 she adopted the habit of walking on the ground with her legs apart, pretending to lose her balance, as if she were on the board. She laughed heartily and said "Bimbam."

At 1;6 she herself swayed bits of wood or leaves and kept saying Bimbam and this term finally became a half generic, half symbolic schema referring to branches, hanging objects and even grasses.

obs. 65. In the case of L. "make-believe" or the ludic symbol made its appearance at 1;0 (0), arising, as in the case of J., from the motor ritual. She was sitting in her cot when she unintentionally fell backwards. Then seeing a pillow, she got into the position for sleeping on her side, seizing the pillow with one hand and pressing it against her face (her ritual was different from J.'s). But instead of miming the action half seriously, like J. in obs. 62, she smiled broadly (she did not know she was being watched); her behaviour was then that of J. in obs. 64. She remained in this position for a moment, then sat up delightedly. During the day she went through the process again a number of times, although she was no longer in her cot; first she smiled (this indication of the representational symbol is to be noted), then threw herself back,

turned on her side, put her hands over her face as if she held a pillow (though there wasn't one) and remained motionless, with her eyes open, smiling quietly. The symbol was therefore established.

At 1;3 (6) she pretended to put a napkin-ring in her mouth, laughed, shook her head as if saying "no" and removed it. This behaviour was an intermediate stage between ritual and symbol, but at 1;6 (28) she pretended to eat and drink without having anything in her hand. At 1;7 she pretended to drink out of a box and then held it to the mouths of all who were present. These last symbols had been prepared for during the preceding month or two by a progressive ritualisation, the principal stages of which consisted in playing at drinking out of empty glasses and then repeating the action making noises with lips and throat.

These examples show the nature of the behaviours in which we have seen for the first time pretence or the feeling of "make-believe" characteristic of the ludic symbol as opposed to simple motor games. The child is using schemas which are familiar, and for the most part already ritualised in games of the previous types: but (1) instead of using them in the presence of the objects to which they are usually applied, he assimilates to them new objectives unrelated to them from the point of view of effective adaptation; (2) these new objects, instead of resulting merely in an extension of the schema (as is the case in the generalisation proper to intelligence), are used with no other purpose than that of allowing the subject to mime or evoke the schemas in question. It is the union of these two conditions—application of the schema to inadequate objects and evocation for pleasure—which in our opinion characterises the beginning of pretence. For instance, as early as the IVth stage, the schema of going to sleep is already giving rise to ludic ritualisations, since in obs. 62 J. reproduces it at the sight of her pillow. But there is then neither symbol nor consciousness of make-believe, since the child merely applies her usual movements to the pillow itself, *i.e.*, to the normal stimulus of the behaviour. There certainly is play, in so far as the schema is only used for pleasure, but there is no symbolism. On the contrary, in obs. 64 J. mimes sleep while she is holding a cloth, a coat collar, or even a donkey's tail, instead of a pillow, and in obs. 65 L. does the same thing, pretending to be holding a pillow when her hands are empty. It can therefore no longer be said that the schema has been evoked by its usual stimulus, and we are forced to recognise that these objects merely serve as substitutes for the pillow, substitutes which become symbolic through the actions simulating sleep (actions which in L.'s case go so far as pretence without any material aid). In a word, there is symbolism, and not only motor play, since there is pretence of assimilating object to a schema and use of a schema without accommodation.

The connection between these "symbolic schemas" or first ludic symbols and the deferred, representational imitation of this same VIth stage is clear. In both types of behaviour we find a representational element whose existence is proved by the deferred character of the reaction. Deferred imitation of a new model takes place after the model has disappeared, and symbolic play reproduces a situation not directly related to the object which gives rise to it, the present object merely serving to evoke an absent one. As regards imitation, on the other hand, we find in the behaviours of 64 and 65 an element which might be considered imitative. In obs. 64 J. imitates the actions she herself makes before going to sleep, or the actions of washing, eating and so on, and in obs. 65 L. does the same. And yet, apart from the fact that this is only self-imitation, it is not purely imitative behaviour, since the objects which are present (the fringes of the cloth, the coat collar, the donkey's tail used as the pillow, and L.'s box used as a plate, etc.) are merely assimilated, regardless of their objective character, to the objects which the imitated action usually accompanies (the pillow, the plate, etc.). There is therefore, and this is characteristic of symbolic play as opposed to mere motor play, both apparent imitation and ludic assimilation. This raises a question to which we shall return presently, but before doing so we must examine the connection between the ludic symbol and the index, the sign, the concept and the development of sensory-motor games.

It is clear, first of all, that the symbolic schemas in question in obs. 64 and 65 are more complex than the sensory-motor index, which has, however, been used by intelligence in the previous stages. The index is only a part or one aspect of the object or of the causal process whose assimilation it makes possible. Being an attribute of the object, it enables it to be anticipated without mental representation, by mere activation of the corresponding schema. For instance, a child of eight or nine months can find a toy under a blanket when its presence is indicated by the rounded outline of the blanket. The symbol, on the other hand, depends on resemblance between the present object, which is the "signifier" and the absent object symbolically "signified" and this constitutes representation. A situation is mentally evoked, not merely anticipated as a whole from the datum of one of its parts.

The symbolic schema of play, therefore, almost reaches the level of the "sign," since in contrast to indices, where the "signifier" is a part or an aspect of the "signified," there is now a sharp distinction between the two. But, as we know, the "sign" is "arbitrary" or conventional, while the symbol is "motivated," *i.e.*, there is resemblance between "signifier" and "signified." Being arbitrary, the sign involves a social relationship, as is obvious in language, a system of verbal signs, while the motivation of the symbol (the resemblance

between signifier and signified) may be the product of individual thought.

This is the same problem as that of deferred imitation. It so happens that at the level at which the first ludic symbols appear the child becomes capable of learning to speak, so that the first "signs" seem to be contemporary with these symbols. We see, for instance, that J. says "Néné" or "Nono," which are verbal signs, while she is pretending to sleep, using the fringe of a cloth like that of her pillow. She uses similarly the signs "(s)avon" and "bimbam." Might we not then conclude that the symbol, even in its ludic form, implies the sign and language, since like them it depends on a representational factor? This representational factor would then have to be conceived as a product of social intercourse, the result of intellectual exchange and communication. But in this case, as in the case of imitation, this explanation can be discarded if we consider the continuity between the behaviours of the sixth and the preceding stages, and also the behaviour of the Anthropoids.

Firstly, the formation of such symbolism is not always accompanied by speech or contact with others. For instance, L. (obs. 65), unlike J., pretends to be sleeping while smiling broadly, without saying a word and unaware that she is being watched. This by itself would of course prove nothing, since interiorised verbo-social behaviours might already exist. In conjunction with other arguments, however, it has its value.

Secondly, we find the chimpanzee playing certain symbolic games such as taking "one of its legs in its hands," and treating it "as something extraneous to itself, a real object, perhaps a doll, rocking it in its arms, stroking it and so on" (Kœhler, *loc cit.*).

Thirdly, the most characteristic effect of the system of verbal signs on the development of intelligence is certainly that it allows of the transformation of sensory-motor schemas into concepts. The normal end of a schema is a concept, since schemas, being instruments for adaptation to ever varying situations, are systems of relationships susceptible of progressive abstraction and generalisation. But in order to acquire the fixity of meaning of concepts, and in particular their degree of generality, which is broader than that of individual experience, schemas must result in inter-individual communication and therefore be expressed by signs. It is thus legitimate to consider the intervention of the social sign as a decisive turning-point in the direction of representation even though the schema at stage VI is already of itself representational. But the symbolic schema of play is in no way a concept, either by its form, "the signifier," or by its content, "the signified." In its form it does not go beyond the level of the imitative image or deferred imitation, *i.e.*, the level of representational imitation characteristic of the sixth stage inde-

motor assimilation. We do, however, recognise that, functionally, the starting point of the symbol is the ludic assimilation of stages II and III.

In stages IV and V there is progress towards symbolisation to the extent that the development of ludic assimilation leads to a sharper differentiation between signifier and signified. In the course of ludic ritualisation of schemas, the child sometimes reproduces a set of actions that he usually does in quite a different context, e.g., lies down to sleep on seeing his pillow (but only for a second, and without going to sleep), or wipes his nose against his mother's cheek (without really doing it). Such actions are certainly not yet properly symbolic, since the action is only a reproduction of itself and is therefore still both signifier and signified. But as the action is unfinished, and moreover, only done for fun, it is clear that there is a beginning of differentiation between the signifier—the movements actually made, and which are only an attempt at play—and the signified, the whole schema as it would develop if completed "seriously." In other words, there is a kind of symbolic allusion comparable to the so-called "fictions" or "feelings of make-believe" which K. Groos attributed rather too generously to animals, and which are merely patterns of behaviour begun but not carried through. Kittens which fight with their mother and bite without hurting her are not "pretending" to fight, since they do not know what real fighting is, any more than J. miming the actions of going to sleep or blowing her nose has reached the stage of representation or the symbol, since there is no interiorised fiction. But we should certainly be adopting a very prejudiced attitude if we refused to admit that these symbols, which are as it were "played," are a preparation for representational symbols.

When, therefore, during the sixth stage, the properly symbolic schema appears by assimilation of additional objects to the played schema and its initial objective (e.g., assimilation of a donkey's tail to a pillow and to the schema of going to sleep), the new situation can be summed up as the end of the sensory-motor aspect of the progressive differentiation between "signifier" and "signified." The object (the donkey's tail) chosen to represent the initial objective of the schema, and the make-believe actions done to it, then constitute the "signifier," while the "signified" is both the schema as it would develop if completed seriously (really going to sleep) and the object to which it is usually applied (the pillow). The actions accompanying preparation for sleep are thus not only taken out of their ordinary context and left uncompleted merely as an allusion, as in the ludic ritualisations of stages IV and V. They are now applied to new and inadequate objects and are carried out with strict attention to detail although they are entirely make-believe. There is therefore representation, since the "signifier" is dissociated from the "signi-

pendently of language. In its content, it is not adapted generalisation but distorting assimilation, i.e., there is no accommodation of the schemas to objective reality, but distortion of the latter for the purpose of the schema. For example, when a donkey's tail serves as a pillow (obs. 64), or a box is used as a plate (obs. 65) it cannot be called adapted generalisation, but merely subjective, and therefore ludic, assimilation. When, however, the same child uses a spoon to pull something towards him, the spoon cannot be considered as the ludic symbol for a suck, and the behaviour must be seen as generalising assimilation. It is only generalising assimilation which leads to concepts, by way of the sign, i.e., through social intercourse, while the ludic symbol continues to be egocentric assimilation, even long after the appearance of language and the most social concepts of which the child is capable.

If, then, the formation of the ludic symbol is not due to the influence of the sign or of verbal socialisation, it must be explained by the previous work of assimilation. It is clear that this type of symbol, like representational imitation, cannot emerge *ex abrupto* at a given moment in mental development. Here, as in the imitative behaviours, there is functional continuity between the successive stages, even when the structures (as opposed to the functions) differ one from another as much as do those of strictly sensory-motor schemas from those of partly interiorised and partly representational schemas. From this point of view, the ludic symbol is in germ (we do not say preformed as a structure, but functionally prepared) in the generalising assimilation of the second stage. When a schema is applied to objectives more and more remote from its initial object, there may be progressive separation between the action and the initial object in that both old and new objectives will be put on the same plane. There is then generalisation of the schema, with a balance between assimilation and accommodation. But in so far as the new objective is considered as a substitute for the initial object, there is emphasis on assimilation, which if it were conscious or mentally interiorised, would constitute a symbolic relationship. It is, of course, not so as yet, since interiorisation is not possible, but from a functional point of view, such a relationship is the forerunner of the symbol. For instance, when a baby sucks his thumb instead of the breast (far be it from us to say that this substitution takes place every time he sucks his thumb!) it would suffice that the thumb served to evoke the breast for there to be a symbol. If this evocation one day takes place, it merely continues the assimilation of the thumb to the schema of sucking, by making the thumb the "signifier" and the breast the "signified." The impossibility of differentiating clearly between signifier and signified prevents us from speaking of the symbol in the second stage, and we cannot therefore accept the idea of preformation held by certain psychoanalysts who already see symbolism, conscious or unconscious, in this sensory-

lied," which is a situation which is non-perceptible and only evoked by means of available objects and actions. But this symbolic representation, like deferred imitation, is nothing but a continuation of the whole existing sensory-motor edifice.

We have already observed that, like the deferred imitation with which it is contemporary, it is related to transformations in intelligence itself, which at the sixth stage, becomes capable of using interiorised and therefore representational schemas, as opposed to external or empirical schemas. We must recall here, as we did when dealing with intelligence (*N.L.*, Chap. VI), the progress of the schemas in mobility and speed to a stage at which their co-ordinations and differentiations no longer depend on external trial and error but take place before the actions themselves. This interiorisation of the schemas of intelligence thus makes deferred imitation possible, since imitation is accommodation of schemas, and its deferred character comes from its interiorisation. But deferred imitation in its turn has the effect of making representation possible by facilitating the interior accommodation of schemas to the situations to be anticipated. In exactly the same way, ludic assimilation, which becomes more mobile and deferred in the sixth stage for the same general reasons, is provided by imitation with the representational elements necessary for real symbolic play.

When a donkey's tail is assimilated to a pillow, or a cardboard box to a plate (obs. 64 and 65), this symbolism involves both ludic assimilation, which distorts objects and uses them at will, and a kind of imitation, since the child does the actions of going to sleep or having a meal. It is even clear that it is just by virtue of this particular kind of self-imitation that ludic symbolism becomes possible, for without it there would be neither representation of absent objects nor pretence or feeling of "make-believe." Generally speaking, we find in every ludic symbol this *sui generis* combination of distorting assimilation, which is the basis of play, and a kind of representational imitation, the first providing what is "signified" and the second being the "signifier" of the symbol. But so far we have characterised play and imitation by two somewhat antithetic functions, one being assimilation of things to the ego or to one another in the interests of the ego, and the other accommodation of schemas to things or to external models. How, then, can the two processes, from being opposed, become united in the symbol from stage VI onwards, *i.e.*, when thought and intuitive or representational intelligence begin?

The fact that imitation and play go through the same stages of development, including the representational phase, is easily explained, since both of them proceed, although in opposite directions, from the same differentiation of the original complexus of assimilation and accommodation combined. The first sensory-motor adaptations, as

well as real acts of intelligence, presuppose both processes, but with a difference of balance. It is therefore natural that intelligence, which brings them into equilibrium and imitation and play, which emphasise one or the other, should evolve concurrently stage by stage. But how can we explain the fact that imitation and play, from being antithetic at first, can become complementary?

We must first point out that no schema is ever, once and for all, adaptive, imitative or ludic, even when its initial function has made it tend in one of these three directions. Therefore an imitative schema can as easily become ludic as can an adaptive schema. Moreover, it must be remembered that every schema always includes both assimilation and accommodation, since each of these two processes is essentially inseparable from the other. It is therefore only their ratio which determines the adaptive, imitative or ludic character of the schema. This being so, we can describe the various relations as follows.

In the act of intelligent adaptation, each given object or action is assimilated to a previous schema which in return is accommodated to it, assimilation and accommodation thus following step by step the sequence of events, being capable on the one hand of anticipating them and on the other of going back over them. In sensory-motor play the object is merely assimilated to an earlier known schema, without new accommodation or anticipation of later causal sequences. In imitation, on the other hand, the earlier schema is transformed by accommodation to the present model, thus becoming susceptible of immediate or subsequent reconstruction. But though assimilation is thus subordinated to accommodation, the model does not merely become part of complete acts of intelligence, since it is assimilation alone which eventually gives it its generalised meaning. And this meaning may be adaptive in character if the imitative reproduction is later incorporated in acts of assimilation accompanied by new accommodations, for which imitation provides assistance and support. But this meaning may also be ludic in character, if the subsequent assimilation is nothing but a distorting incorporation of the perceived object in earlier schemas originally related to a different object.

The essential difference, therefore, between the ludic symbol and adapted representation is the following. In the act of intelligence assimilation and accommodation are constantly synchronised, and consequently in equilibrium. In the ludic symbol, however, the present object is assimilated to an earlier schema having no objective relation to it, and it is to evoke this schema and the absent objects related to it that imitation comes in and provides the "signifier." To sum up, in the ludic symbol, imitation is not related to the present object but to the absent object required, and therefore imitative accommodation remains subordinated to assimilation. In deferred



imitation, on the contrary, imitative accommodation is the aim, and subordinates reproductive assimilation. In the act of intelligence, then, imitation is concerned with the object to be assimilated, and accommodation, even when it continues as representational imitation, still remains in equilibrium with assimilation.

In conclusion, in so far as intelligence, imitation and play are considered, all three, exclusively as sensory-motor, imitation is a continuation of accommodation, play a continuation of assimilation, and intelligence a harmonious combination of the two. In the deferred and interiorised behaviours which characterise the beginnings of representation, imitation, which then extends accommodation to absent as well as to present objects, thereby acquires a function which produces "signifiers" related to the "signified," which are adapted or ludic according as they result from accommodated assimilation or from distorting assimilation, the former characteristic of intelligence and the latter of play.

## CHAPTER V

### CLASSIFICATION OF GAMES AND THEIR EVOLUTION AFTER THE BEGINNINGS OF LANGUAGE

HAVING analysed the genesis of play during the first two years of life, we must now follow its subsequent development, particularly at the levels of verbal and intuitive thought (from two to seven) and of operational intelligence, which is concrete from seven to eleven, and abstract after eleven. But though in the pre-verbal stage play appears in a relatively simple form, being essentially sensory-motor, this is no longer so later on. The first thing to be done, therefore, is to find an adequate classification, since every methodical analysis involves three distinct, successive stages: classification, discovery of laws, and causal explanation. In the field of play, the usual classifications do not seem to be adequate, because they are the result of preconceived theories, and not of purely structural analysis independent of interpretations. We shall begin, then, by examining their practical value.

#### § 1. *Critical study of the usual classifications of ludic behaviours*

We have tried to make as complete a collection as possible of children's games, both by watching our own children day by day in their spontaneous games, and by observing, with the help of various collaborators, games in schools (particularly the "Maison des Petits" in Geneva) and in the street. With about a thousand such observations at our disposal, we attempted to apply to them the recognised classifications. It immediately became obvious that most authors had in mind only certain typical games, in particular those which corresponded to their own explanations, and that they ignored the vast majority of intermediary cases because they could not be classified according to their preconceived ideas.<sup>1</sup> If, on the other hand, we decide to take into account all cases, whether typical or not, we are forced into a classification according to mere structures, since no other criterion can be found which is at the same time general and yet capable of application to the detail of particular cases.

One well-known point of view, for example, has been to classify games according to the tendencies which they put into action, *i.e.*, according to their *content*. This classification was attempted by K. Groos, followed by Claparède. Sensorial games (with whistle, trumpet, etc.), motor games (ball games, running, etc.), intellectual

<sup>1</sup> The interesting classification of J. O. Grandjouan *Le qui vivé, Jeux d'observations (Éclaireurs de France, 1942)*, should, however, be noted.