All forms of play are transformations of four basic modes by which people know the world: copying, analysis, prediction, and synthesis. Transformation involves foregoing the usual outcomes of adapted intelligence for the sake of voluntary control of one's own behavior in games, and for the excitement of novel affective, cognitive and behavioral variations which then become possible. Imitative play, exploratory play, testing play, and contesting are discussed in terms of their social and personal meanings. Several contesting games enjoyed by children of varying age levels, such as Hide and Seek, Red Rover and Prisoner's Base, are described and classified according to actors, acts, space, and time. Games reflect society in general in that they embody both rule and reason, chance and madness, and societies in particular in that specific types of games enjoyed reflect differing modes of life. It is suggested that the primary function of play may be the enjoyment of a commitment to one's own experience. (MH)
The Playful Modes of Knowing

Brian Sutton-Smith

How to Define Play

It is not easy to define play. Ours is not a civilization that has paid much rational attention either to play or to other expressive forms (art, dance, drama, etc.). These matters have been felt to be irrational, trivial, ephemeral, or "projective", but not really critical. The seventeenth century creation of childhood as an "innocent" and unsophisticated period of life has led us, until quite recently, to attribute to it an unimportance in the major pragmatic undertakings of adult existence. Anything that children did, therefore, was regarded as not important, and as play. And, although in the past fifty years, some intuitive students have sought to rescue something from this pejorative definition by saying that play is a child's work, little of a systematic nature has been accomplished. We have to thank the Genevan psychologist Piaget for the demonstration that much of what we had called play, is really the activity of intelligence. The child is learning discriminations and forms of effective behavior from the very first days of life. We need to thank also a generation of American psychologists for demonstrating that much of the time the child is intently "exploring" his world and that we should not call that play either.

What then is left? There is at this point in time simply not enough careful observation of children's behavior to give an authoritative answer to that question. There are hosts of scattered anecdotes but little that is of scientific merit.

In this article I wish to put forward some tentative formulations which seem to me to provide a useful way of thinking about this very complex and diffuse subject-matter. There is a risk in this, but if these suggestions promote more directed inquiry, then they will have been justified. Basically my point will be
that all forms of play are transformations of one or other of four basic modes by which we know the world. Let me deal first with these four ways of knowing, and then go on to the types of play that emerge from each. First, we may come to understand something about the world (of things or people) by **copying** that world, or by bringing our own actions and thoughts into correspondence with what we perceive to be there. Children's imitations are of this sort, and their imitative play grows out of it. Secondly, we may come to understand the world by exploring the connections between events. We may **analyse and seek causes** for what appears before us. Exploratory play issues from this approach. Thirdly, we may understand the world by **predicting** what will happen when we try something out. Here we learn by doing, by consequences, because we are testing things out. Play as testing is an outcome. Finally, we may try to understand the world by putting it together in our own way, by **synthesis**. Here we create new patterns and novel configurations out of our own experience. In play terms we build model worlds as constructions.

In each case play is a transformation of one or other of these modes of knowing into something else. But what else? To answer this question we need to say something about the special character of feelings in play, about the special character of volitions and about the special character of play structure. Entering play seems to involve a certain relaxation of feelings. Babies who have had their bottle and are "playfully" sucking and tongueing in their mouth have a quiescent euphoric ruminative quality to them. Paradoxically, however, once a play gets under way there is often the rise of new forms of feeling and tension, but these are participated in **intensively** rather than otherwise. For example, a championship chess player was recently quoted as saying, "For the most part chess is everything. It's a tight world of 64 squares. It's an unreal fascination. You're always thinking. You're always in the present time. You know you're alive. You're always being challenged and threatened..."
3.

Perhaps there is a temporal sequence to play with first a relaxation of the customary modes of feeling, then the induction of new and play-appropriate tensions, followed in turn by a relaxation at the end. Whatever the case the "pleasure" of play has some such distinctive alternation between relaxed and heightened affect. Perhaps in both cases the answer lies in the fact that play and game involvement are customarily voluntary. The player begins because he wants to, and once in the play makes his own choices, and puts his behaviors together in the novel ways he wishes. He has relatively more freedom than usual from the demands of the customary sensory context and because of this can sustain the direction of his chosen activity without interference for considerable periods of time. Being active rather than passive before fate may account for the immediately euphoric quality of play while the exigencies of the new game may account for the novel tensions that then arise. These latter require some sort of structural analysis. With games this is easy. The thoughts of the players and the tensions that arise in the game are ordered by the character of the game, its plots, subplots, its winning or losing outcomes and the fact that it exists in a temporal and spatial world of its own. In play such structures are less readily observable. What appears to occur, however, is that the child induces excitement by altering the previous structures of adapted thought. If the baby has previously spent considerable effort in reaching to pull a string hanging from her crib, she will at some subsequent time, jerk at the same string with less concentration on the original result, and great enjoyment that she is jerking it in a manner irrelevant to that original result. It is as if the original outcome becomes a pretence for the jocular instrumental behavior of pulling the string. The excitement and "tension" of the play seems to arise from this dissonance between the old end and the new means.
These considerations then lead us to define play briefly as a transformation of feelings, volitions and thoughts. But more fully as the intentional institution of a spatio-temporal structure in which the usual outcomes of adapted intelligence are foregone, for the sake of the voluntary control of behavior and the excitements of novel affective, cognitive and behavioral variation that then become possible. In play the adaptive goal seeking intentions become the instrument for behavioral variation. The ends are indeed subordinated to the means. In play the means justify the ends.

Imitative Play

The earliest forms of imitative play in the first year of life usually involve the child imitating the parent who has been imitating the child. The baby can only do well what she has already done, so that the mother who imitates say the baby's sucking sound (at 6 months) may then induce the baby to reproduce that same sound on a voluntary basis. The difference between the original sucking and the new sucking noise causes them both to laugh. By the end of the first year a number of mother-child games (for example, hand-clapping) have this circular imitative basis. By the second year the infant can imitate other people by herself and when they are no longer present. This deferred imitation is illustrated when the 18 month old infant takes the face cloth and "pretends" to rub it all over her face as if washing, but does it nowhere near the original wash basin. If she does this washing at the basin we might say that is is intelligent imitation, a mode of knowing. If she does it nowhere near its proper setting we can say it is imitative play. In this second year of life most of the imitative play will have a partial character, with particular acts borrowed from sleeping, eating and washing being copied in the play. In the third year, the children show a greater awareness of their own pretence and tend to copy other people as a whole. They become mothers, fathers, etc. What is interesting here, is that in most of this early imitative play the child imitates
the important and powerful people in her own life. Apparently in homes or in cultures where the parents are highly authoritarian and do not show much role flexibility then such rather rigidly imitative play continues throughout early childhood. Alternatively, in cultures where a much greater degree of role flexibility is both required of adults and demonstrated in adult-child relationships, then at about the fourth year, the characters in the children's play become increasingly imaginary and depart from being faithful copies of rather rigid parental prototypes. In this case the characters in the play become absorbed into play worlds of high imaginativeness and are better taken as an illustration of synthetic than of imitative modes of knowing. The cross-cultural information would appear to suggest that the rigid imitation of parental power has been the rule throughout most of human history, and that the rather imaginative play we have come to observe in modern nursery schools is a rather late product in cultural development. Similarly, the toys of imitative play may reflect the children's needs for exact replication of over powerful superiors, or for more flexible venture into novel worlds. The social play of the fourth year also reflects these differences. Traditionally the "gamesmanship" that surrounds this play involves a more dominant child forcing the less powerful children into inferior roles, arbitrarily fixing the part they shall play and refusing to reverse the roles. This order of events is then maintained by threats and bribes. In modern nursery schools there is more readiness to take turns and to alternate the more desirable roles. Between four and six, social play of the imitative sort tends to be governed either by one player acting as a central person and the others acting in satellite roles, or by players taking turns or alternating the roles, or finally, by all the players doing much the same thing at the same time in a parallel fashion. In this age group in earlier times in America there were
a number of group singing and rhythmic pastimes in which choral imitative behavior was central. These circle pastimes are still to be found in some nursery schools and in some rural or immigrant environments. Many of these were simple group pantomimes such as "Ring a Roses", "Baloo, baloo, balight", "Luby Loo", "Mulberry Bush", but most were choral celebrations of marriage or funeral customs such as "Poor Alice is a-weeping", "Sally Waters", "Knights of Spain", "Green Grow the Rushes, Oh", "Green Gravels", etc. Today we see less of these but no less of the more informal imitative group games known by such names as "houses", "cars", "trucks", "schools", etc. For some reason there has seldom been any systematic examination of the latter games; perhaps because they are more often found and reach higher levels in home and neighborhood than in the more accessible school playground. Whatever the reason, the record contained therein is probably a better indication of how our civilization is going than anything else that children have to tell us.

**Exploratory Play**

This is a difficult type of play to disengage from exploration as such. When a child discovers a novel object and examines it then that is not play. But what if the novel object is a toy which the child is examining in his usual play milieu? Is that play? As the answer lies in the child's attitude at the time of examination, it is difficult to provide an answer, particularly for the first two years of life when play consciousness is not clearly differentiated. There are extreme occasions when the child's behavior is clear. He is most earnestly concerned with the character of the toy and begins to make it do things for him. That is exploratory play. But in between there is a large area where objectivity about class classification is most difficult. Here we may have to await more careful studies using video tape procedures.

Still even in the first six months of life there are occasions when the child's play with tongue and lips, or play with hands and fingers seems to have a pleased,
relaxed quality that might well be exploratory play. And in the second six months, play with the parents' face and hair is often accompanied by smiling and laughter. In the second year the list of activities that are involved in exploration and may well give rise to exploratory play includes such things as tasting, scribbling, emptying, filling, inserting, putting in and out, pulling, stacking, rolling, climbing into and under small spaces. By the third year this exploration grows increasingly complex with various patterns of organization of the materials becoming manifest. The child arranges, heaps, combines, transfers, sorts and spreads. His analytic activities permit him more combinations so that it becomes hard to tell whether analysis or synthesis is the most important. By the third year also, the child is "aware" that he is playing and that his objects are "toys". His awareness of their spatial and temporal differentness entitles us to call this exploratory play. He piles the blocks in new and amusing ways. There is an excitement in novel manipulations and novel effects. Much so called "destructive" block play is of this character. Towers of blocks make marvellous effects as they crash to the ground or get higher and higher before falling. Blocks do odd things when you push one against another, then another against the first one, and then another and another. Clay can be pushed and squeezed and torn into pieces all of which yield funny shapes and different feelings on your fingers. Sand pours from buckets and over your legs in pleasant ways. There are again novel feelings, novel effects and novel relationships in a familiar setting. At the same age level also, from three to four years, we should not neglect the extensive verbal exploratory play that children exhibit, often it seems most frequently while sitting in their beds early in the morning or before sleep at night. They put words and sounds together in novel combinations not usually heard in their everyday sound making. Of course, they also indulge in what sounds like more strict practice of conventional sequences.
In childhood, exploratory play is facilitated in today's world by innumerable toy models (cars, ships, skeletons, etc.) which partly confine analysis to their own terms, but permit accompanying fantasies in the midst of their examination and construction. Verbal exploratory play is also conventionalized in childhood through humour and nonsense. Riddles expose the child to novel contingencies in semantic relationships (Why did the dog get out of the sun? He didn't want to be a hot dog.). Nonsense yields absurd possibilities ("I took a chair and sat down on the floor").

Testing Play

It is not easy to separate exploration and testing. But it seems useful to do so. Exploration as used here refers to the object-world, and the analysis of relationships in and between things. Whether the causes or effects of those things are to be examined, it seems useful to call all such analyses, exploration. Testing refers to the subject, to the player and to his trying himself out in innumerable ways. Often it is not easy to tell whether he is testing himself out or testing out the nature of an object or a vehicle, but there are times when such distinctions seem possible. In the second year of life there is a great deal of large motor testing. The child crawls under things, into things, he pulls wagons, lifts objects, pushes, hummers, splashes, rides, balances, climbs, digs, opens, closes, runs, throws. Much of this is a direct testing of what he can do in the given situation and is a form of adaptation to that situation. Once again, however, there are times when there is an exuberance to the pulling, the pushing, the creeping into cupboards, etc. that entitles us to call it play. Testing play we see as a form of self-validation; a statement that I can do it and do it with variations and with an awareness of my own powers (or "with knobs on" as some slang has it).
As we proceed through childhood the tests that the child enjoys increase in variety and character. The baby climbing the stairs gives way to the child jumping down them three at a time, or sliding down the bannisters. There has been surprisingly little emphasis in education on these self-testing activities, though the importance of tests applied by others has never been overlooked. The psychological literature makes some allusion to testing in terms of concepts like the need for achievement, the level of aspiration and "inner" as compared with "outer" motivation. The most obvious way in which testing takes place in play, however, is in the social form of games. Here the child obtains his self-validation by using others as his standard of competence. He seeks out competitors matched with him in talent against whom he can measure his progress. These contests are a sufficiently important form of play that it seems desirable to deal with them at considerable length under a separate heading.

Contesting

Most games are forms of contesting. It is true there are some parlor cooperative games and some pastimes often called games which have a more ritualistic quality, but these are relatively infrequent in usage. The major categories of games deal with some of the major forms of emotional life. There are games of approach and avoidance, the behaviors withdrawing and escaping (Hide and Seek), in which the emotion of fear and the adaptive function of protection seem to be tested out. Again there are games of attack, in which anger and the adaptive function of destruction are tested (Dodge Ball). There are games of choice in which joy or sadness, mating or deprivation are tested (Flashlight Kissing); games of observation in which expectancy, sensory functions and exploration are exercised (memory); games of impulse-control in which surprise, stopping and orientation are critical (Priest of the Parish).
Each of these types of contests can be arranged in terms of a developmental sequence which children go through as they get older, between the ages of five to twelve years. Here we will illustrate the child's development through these levels in the approach and avoidance games only. In each case it is necessary to discuss the particular spatial and temporal relationships in the game, the approach and avoidant actions that are special to the game and the relationships between the players as actors and counter-actors.

**Level I (Hide and Seek).** These games are usually first played extensively between five and six years, though they continue for many years after that, particularly in the play of girls. There is one central person (The IT) who has most of the power (he can select whom to chase, when to run, etc.) and a number of other fugitive persons who try to hide, or escape by holding onto a safe base or saying some safe term (pax). The reversible actions of the players are, as suggested, hide and seek, or in the parallel games of tagging, chase and elude.

The space is differentiated into "hiding places" or "safe" spaces and dangerous territory. These two qualities of space (security v. danger) may be analogous to the usual division of religious and mythic spaces into the sacred and the profane. The temporal arrangement is episodic. Each incident is of equal weight, and one follows the other interminably. When the IT tags another player, he is replaced by that player and the game continues.

**Level II (Release or Ring a Lievo)(7-8 years).** Again there is a central IT figure who attempts to capture the other players. But now these other players can harass him and rescue each other. While he is accumulating the captured at his base, if one of the free players rushes through that base and cries "release" all the captured players are again free. We note here that as well as "hideways" there is now a "captive base". Space has been differentiated into these two special
types of territory. Time has also changed. It is now cumulative. Each episode adds to the one before it, until the IT catches all players when he is then relieved of his role. But if there is a rescue his cumulative organization of temporal units breaks down.

Level III (Red Rover) (9-10 years). The IT player calls the others across from one base to the next. As they race from one base to the next he attempts to catch them. If he succeeds they join him in the middle and help him catch the other players. The play takes place now within defined boundaries with the two safe bases at each end. The play reaches an exciting climax when everyone except the last player has been caught. He is the strongest of all and it may take all the other players to capture him. Here the units of the game take on a crescendo effect and we may be justified in calling this climax time, because the capturing of that last player is often the most exciting episode. At some middle point in the game, it resembles a team game with half the players on each side.

Level IV (Prisoners Base) (11-12 years). We now have two relatively undifferentiated teams each pursuing the other over a large, but defined territory with the pursuit players attempting to return to base before they can be hunted down. There are home bases and prisoners' bases and one team attempts to eliminate the other. When this is done the game is over. We may schematize the changes across these games as follows:
What is occurring across these four levels is a testing of powers first against "magical" IT figures, and finally against other players of relatively the same skill. The actions in this sequence are those of chasing, escaping, capturing and rescuing with the final game of prisoners base containing both sets of elements. There is a new form of spatial and temporal arrangement at each level. We know that these arrangements of space and time correspond to parallel forms of cognitive organization in children of these age levels. But we may assume that when presented in these exciting forms, the spatial and temporal qualities take on a vividness which they may not have when presented more impersonally. Notions like episodic time, cumulative and climax time are also illustrated in the picaresque stories, folktales and dramas which children read, and which are presented to them in the mass media. There is some cross-cultural data which shows that games of these sorts exist in those cultures.
where children are made anxious about independence. Their running back and forth between bases appears to be a representation of their attempts to come to terms with their apprehensions about becoming independent as against staying dependent, leaving bases as compared with staying in them if you wish. What they test out with each other is their ability to hide, to escape, to capture, to rescue without becoming overwhelmed by fear.

Similar levels can be illustrated for the other types of games. The relationships between the levels in games seems to be additive. The younger elements are added onto rather than disappearing. A sport of adults such as football may include many of the elements mentioned here.

When game progress is viewed in this developmental fashion it is difficult to resist the view that important qualitative properties in the understanding of social relations, social actions, space and time are being learned by the children that proceed through the series.

Model Construction

This is hard to observe in the very young but becomes quite explicit by four years or so when the world-building of houses, tea-parties, blocks, cities, trucks, etc. is at a peak. World building is not always easily separated from imitative and exploratory play, but is evident when the child attempts to put the elements of his experience together in unique ways, especially when these involve flights of his own imagination. During childhood, play with model worlds of trains, dolls, cars, etc. may be facilitated by commercial toys. This is the play which the psychoanalyst Erikson has suggested is the analogue of the adults' "planning" activity. There is a widespread feeling amongst adults that because they provide too many toys and models, modern children actually spend less of their time in these solitary constructive pursuits. Unfortunately, there is little or no comparative evidence on the matter.
Actually the problem may lie less within the toys than with the adults' own inability to provide examples of this sort of creative activity in their own behavior. Again a key form of model building in today's society (as indicated by its movies and television), is in terms of fantasies about novel human inter-relationships. It is probable that the industrious product oriented type of play that we of an older generation tend to encourage as model building is more related to nineteenth century industrialism than to tomorrow's customers. One is impressed, for example, with the speed with which today's children construct gregarious fantasies for their informal play, together with the humor and versatility that is sometimes shown in these elaborations. Again, here is another fitting area for research into the future of our own society.

**Discussion**

The point of view taken here is that a great deal of systematic observational work, probably with video tapes, will be necessary before we can decide what we mean when we say a child is at play. In the meantime, it has been suggested that four major modes of knowing, namely copying, analysis, prediction, and synthesis, might help to focus our attention. I am certain, however, that most readers will be unsatisfied with this state of affairs. They will want to know what play does. Why is it so important to define it? Unfortunately, answers to this sort of question must be even more imprecise than the missing observations. From the analysis of play in animals we know that play increases as we ascend the phylogenetic order. The more complex the animal, the more play it exhibits. From cross-cultural studies we know also that as culture gets more complex, more types of games are added. Also, that different types of games are systematically related to other cultural variables. For example, games of strategy appear in culture when diplomacy, class stratification and warfare are institutionalized. Games of chance appear when survival conditions are uncertain and divinatory attendance on the Gods is a method of making decisions. Again, studies of devoted game players in our own culture
show that they have distinctive attributes to go along with their game playing. They seem to be molded by their games, they don't just "play" them. General discoveries of this nature indicate that play and games are probably "functional" in culture even though we have had the habit of thinking of them as non-functional or trivial. Just what this functionality is, however, is another question. I suspect that in play, as in art, the primary function is the phenomenologic enjoyment of a commitment to one's own experience. In play, as in art, the player makes the choice in a world increasingly aware of its own alienating powers, such a commitment may be accepted as having considerable survival value. When these choices are made, however, the uniqueness, nonsense, triviality, distortion or serendipity that follow may well bring a number of secondary gains in heightening the players' flexibility and imaginative capacity as well as in exercising the gamesters' competences of a physicalistic and strategic sort; even in giving the chance players courage and discrimination before the odds of lady luck. But these secondary gains are clearly of an indirect sort. Because the games are in part imitative of the larger culture they embody its processes and attitudes. But because the play and games are voluntary systems they admit of madness as well as sanity. So that what ensues may be only in part relevant and in part a rehearsal for any specific cultural outcome at any given time. Players and gamesters are motivated primarily to enjoy living. This is the major rehearsal value of play and games.