CONTEXT OF PLAY

A longitudinal, observational study of children's play.

BY

MEHRI TAKHVAR

A THESIS SUBMITTED FOR THE DEGREE OF DOCTOR OF PHILOSOPHY AT THE UNIVERSITY OF SHEFFIELD, DEPARTMENT OF PSYCHOLOGY.

September, 1985.

TO MY BROTHER:

MEHDI

ACKNOWLEDGMENT

I would mostly like to thank my supervisor,Dr. Peter.K. Smith for weeks, months and years of patience, support, understanding, encouragement, and his comprehensive help in my projects. I am for ever in his debt.

I would like to thank all children at Mushroom Lane nursery and their parents, particularly those eight children who contributed most of my data for the first project. Many thanks to their parents who patiently cooperated and helped my study with their every day reports.

I would like to thank the staff at the Mushroom Lane nursery for their tireless effort and assistance.

I would also like to thank Mr. M.A. Cruse for his technical help and advice with equippment.

Many thanks to Mr. N. Gore and Mrs. s. Whitney for their great help throughout the process of data collection for the third project.

I would like to express my gratitude to:

Dr R. Noble for his statistical advice and computer programming at the initial stage.

MR. Asher Cashdan for his kind critical review of the manuscript.

Lastly,my special thanks to my sons Ali and Nader Keyhani for being exceptionally 'GOOD' and 'SUPPORTIVE'.

TABLE OF CONTENTS

CHAPTER ONE

Play, and theories of play

To simplify the review of play theories they may be classified under three headings: classical theories of play, early 20th century theories of play, and recent theories of play.

Classical theories of play

One of the earliest definitions of play was based on the notion of surplus energy. An exponent of this was Schiller, poet and philosopher of the 18th century. He defined play as 'the aimless expenditure of exuberant energy'. In other words, play was the product of the superfluous energy remaining after an organism had satisfied its needs. However, Schiller also considered play as 'symbolic activity' through which an organism transforms reality and gives birth to language and thought in order to gain symbolic representation of the world. How this definition co-exists with the use of the word 'aimless' is open to question.

Herbert Spencer (1873), the British psychologist and

philosopher was the first to attempt to provide a more scientific basis for the 'surplus energy' theory of play. He was an 'instinct' theorist who believed that the human and animal species were instinctively active. He claimed that the nerve cells of organisms were torn down through either mental or physical activities. They rebuilt themselves gradually, providing the organism with a potential and a readiness to act, the excess nervous energy being spent on play. The amount of this energy, he related to the phylogenetic status of the organism. According to him, the higher the species of animal the more time is spent on play, whereas in the case of the lower species this energy is invested only in satisfying the organism's primary needs. To Spencer, play was an uncontrollable desire of the organism during the period of childhood.

This theory of surplus energy has been criticised by many scholars on the grounds that there is a lack of empirical evidence, and that it contradicts both the Darwinian theory of evolution and indeed Spencer's own theory of evolution. These theories of evolution indicate, of course, that when a particular behaviour proves to be advantageous to the organism it will be developed from generation to generation. The theory of surplus energy on the other hand indicates that play is a superfluous, non-productive activity which may be pleasurable but does

not provide evolutionary development. The theory has also been criticised on the grounds that children sometimes play to the point of exhaustion (Rubin, Fein and Vandenberg, 1981). However, this criticism is yet to be scientifically demonstrated.

However, quite contrary to the surplus energy approach is the theory of relaxation which describes play as an activity deriving from an energy deficit. Play is viewed as either recreational activity (Lazarus, 1883) or behaviour stemming from a need for relaxation (Patrick, 1916).

Lazarus, a 19th century philosopher, postulated that play served a restorative purpose after an individual had spent some time on physical or mental activities. Lazarus was not particularly interested in play and did not specify **how** play activity had a restorative function.

Patrick suggested that relief from the fatigue caused by mentally strenuous work could be gained through play. He viewed play as the practice of 'race habits' or 'race memories'. He noticed that the first musical instrument commonly used during the period of babyhood resembled those instruments used by primitive humans such as the rattle, horn and drum. Play in childhood was considered to be a 'natural' and 'instinctive' activity.

This theory is open to question because of the lack of empirical evidence to show that play is based on folk memory

and indeed this would be difficult to prove. The idea of play as only occurring as an aftermath of strenuous mental activity seems inappropriate to the life of the young child and of those indulging in purely physical work. This theoretical framework assumes that play lacks a cognitive function or content, an assumption at variance with many recent empirical findings (e.g Piaget, 1951; Bruner, 1972; Fein, 1979).

The third classical theory of play is the theory of practice or pre-exercise. This stems from the work of Groos (1898,1901), in his reviews of animal, and human, play. He considered imitation of the adult to be an important element in the child's play. According to Groos the function of the period known as childhood is play, and play serves as the practice of adult activities. Thus the more complex the organism is phylogenetically, the longer the period of childhood, during which the organism would practice those instinctively based skills necessary for survival during adulthood.

The major contributions of this theory comprise an explanation of why play is found mainly during childhood, a discussion of the relationship between play, psychology and intelligent behaviour; and an explanation of the role of specific forms of play as pre-practice for adult life.

The fourth treatment in classical theories of play is

the recapitulation theory, itself influenced by the work of Darwin (1872). The earliest work within the framework of this theory is described in the writings of Hall (1920), who was acknowledged as the 'father of the child psychology movement' in North America. He viewed child psychology as a means through which evolution both 'between' and 'within' species could be detected. Hall also viewed childhood as a link between the animal and the human. The stages of development of the fetus he saw as reflecting the stages passed through from protozoan to the human. During the period of childhood the child would 'play out' evolutionary stages within and between species. For example, he focussed on climbing and swinging, these resembling the non-human stages, and rough and tumble play reflecting the savage stage, and so on.

The function of play within this theoretical framework is cathartic in nature. This approach is similar to that of Freud and of contemporary psychoanalytic views of play, but Hall viewed the cathartic element somewhat differently in that he saw it as a product of evolutionary biology. He suggested that the social instincts found outlets for expression in play situations. Some instincts were weakened, while allowing the acquisition of those higher life form behaviours which could be seen in the adults of modern civilisation.

There are several criticisms to be levelled at this theory : firstly, it relies on a theory of evolutionary biology (Lamarckian theory), by which elaborated skill or behaviour can be passed down genetically from one generation to the next - a theory generally regarded as false. Secondly, there is a lack of empirical support for the hierarchical sequence of stages of play as described by Hall. Thirdly, this theory does not seem to take into account the greater use of abstract and symbolic thinking and the sophisticated use of technology which has such an important part in the play of children to day.

The impact of the classical theories

Despite the fact that the early theories were widely criticised, their influence on contemporary writings has been undeniable. The 19th century idea that in order to develop a symbolic representation of the world, children transform reality through their play activities (Schiller, Spencer and Groos), reappears in the works of Piaget (1962), Vygotsky (1967), and Singer (1973) amongst others. Similarly, the different forms of play activity distinguished primarily by Schiller and by Spencer and Groos, that is, sensory motor activity, symbolic play and games with rules, were the basis of the hierarchical models

of play and the category systems devised by Buhler (1935), Valentine (1942), Isaacs (1935), Piaget (1951), and Smilansky (1968). That aspect of play highlighted by Spencer and described by him as 'non literal' or 'as if', where the child uses an object to represent other things, reappears in the writings of Bateson (1968), Fein (1975), and Garvey (1977). The early ideas based on the concepts of surplus energy, practice, and recapitulation are used in the more recent research of Singer (1973), Lieberman (1977), and Dansky (1980). The approach to play which sees it as a 'pre-exercise' and a mastery of activities with a delayed function suggested by Groos is reflected in contemporary studies of Bruner (1972), and Sylva (1976). Similarly the interest in the cathartic elements of play reappears in the work of contemporary psychoanalysts. The Spencerian notion of 'neural mechanism' has been used in the more recent 'arousal' theory of Berlyne (1960).

Early 20th century theories of play

During the first half of the 20th century 'play' as a scientific topic did not attract scholars in its own right, but was rather approached indirectly via other areas in psychology. For example psychoanalysts discussed play in

connection with 'wish fulfillment', 'anxiety', and the 'ego' processes (Freud, Hall, Peller, Erickson and Klein).

Arousal theorists viewed play as a mechanism associated with exploration and with regulation of arousal motivation (Berlyne, Ellis, Hutt and Fein). Cognitive theorists also viewed play in terms of more general psychological development (Piaget, Vygotsky).

Psychoanalytic theories of play.

Freud was not particularly interested in play and did not put any systematic effort into this topic. Instead he made remarks on play and embedded them in his discussion of such issues as the repetition-compulsion or the dynamics of humour. In his early writings he describes the properties of the 'id' and the pleasure principle, and focuses on wish fulfillment. According to Freud, 'the opposite of play is not what is 'serious', but what is 'real' (Freud, 1959,p. 144). This notion emphasises play as a safe context for venting socially unacceptable, aggressive impulses.

Furthermore Freud focussed on the concept of the repetition compulsion. This was described as a psychic mechanism which aids the individual to cope with traumatic events. He suggested that the individual attains mastery

over traumatic events through compulsive repetition. He concluded that rational thought associated with the developed ego reduces the occurrences of such compulsive repetition during adulthood. But children are more susceptible to trauma, since the structure of the ego and psychic defences are not sufficiently organised. Thus they fail to guard themselves against the effects of anxiety-producing events. Consequently repetitious behaviours are more frequent during childhood, and are manifest in play. The most interesting aspect of play according to Freud is the role of fantasy in which an unconscious motivation replaces the socially unacceptable wishes of the 'id' with the acceptable activities of the 'superego', thus developing the 'ego' itself. He suggested that a particular dynamic may generate play and participants tend to select their roles and imitations from those people by whom they have been impressed.

Although Freud himself wrote only a small amount on play, the conceptualisation of his theory has stimulated a number of studies in recent years focussing on both 'wish fulfillment' (Peller, 1952), and mastery elements of the theory (Erikson, 1940); also he provided the basis for an interpretation of play as aiding the development of stability and maturity; following this, play has become a clinical tool over recent years, through play therapy. The

Chapter 1: Play Theories

Freudian notion of play may be understood further through the work of Peller and Erikson.

The motivation behind 'role' taking and 'imitation' in the play of children concerned Peller(1952). According to her children's role play is based on feelings of love, admiration, fear and aggression. Alternatively they may regress to the period of babyhood within the safe confines of play in order to imitate an animal, a baby or a clown, such behaviour not being otherwise acceptable.

Peller suggested a link between changes in the structure of play, and psycho-sexual development. In this theory, solitary play is the reflection of frustration, a symptom often being the manipulation of 'body parts'. Imitation of the adult to the adult (I can do to mother what she did to me), is referred to as the 'pre-oedipal' stage. During the 'oedipal' stage children will compensate for the powerlessness of their strong feelings towards certain adults by taking on their roles. The 'post-oedipal' stage is when the child moves on to attempt to build up independence from the external super-ego; meanwhile, the child tries to create a self contained social order which takes the form of games with rules played with peers.

Peller, like Freud, assumed a cathartic function of play. This has been widely criticised in terms of the methods employed, mainly studies using doll play. There

were few attempts to determine the relationship between doll play activities and other behaviour. Also, the investigators failed to establish reliabilities in their investigations.

Erikson (1940,1963,1977) emphasises the understanding of the normal development of the ego in individuals. He put forward the idea that play serves a combination of three aspects of life: the past, the present, and the future. In that way the uncertainties, anxieties, and hope of the ego can be dramatised.

According to Erikson changes in play relate to changes in the psycho-sexual state and the state of the ego. For example, during early childhood children explore their competence and budding sexuality, the scenes constructed with the toys reflecting the space-time microsphere. At later ages children develop their attention towards adult forms of play such as creative imagination. These forms of play aid the exploration of the limitations and possibilities of cultural myth systems, be they in art, science, or everyday life.

Erikson also suggested that psycho-sexual conflicts may be inferred from the spatial configuration of object play. From his experimental studies he reported that boys built vertical constructions with vertical and dynamic themes whereas girls' productions consisted of enclosures with

static themes. Further, for children facing sexual maturity their play reflects sex differences in their evolving sexual morphology, e.g girls' productions were seen as reflecting the passive enclosed nature of female genitalia, whereas boys produced constructions reflecting the intrusive, erect nature of the penis.

Erikson's findings take a place somewhere between psychoanalytic case studies and systematic psychological research. However, research results have been reported which cast doubt on Erikson's psycho-sexual differences in children's play (Janeway, 1971; Sherif, 1979).

Erikson's contribution to the mastery aspects of Freudian theory has been very limited. Nevertheless, his ideas helped direct the use of play therapy in clinical practice, despite the fact that Freud himself never addressed the therapeutic significance of play and indeed reported play only to assess the child's intrapsychic conflicts. The use of play therapy was developed by Klein (1932, 1955). She proposed the use of play instead of verbalisation in the psychoanalysis of children.

Chapter 1: Play Theories

Play and cognitive development

The foremost exponent of a cognitive view of play has been Piaget (1951, 1962). The concept of play within the Piagetian framework is not based on the central theory, but in fact is an extension of the Piagetian concept of assimilation. Piaget proposed that human behaviour falls between two poles, assimilation and accommodation and that the act of intelligence was to find and maintain an equilibrium between these two poles. He suggested that assimilation occurs when an individual applies his/her 'existing way of thinking' to a familiar object or situation. Accommodation refers to the new object or situation. In this theory, play is defined as pure assimilation or primacy of assimilation over accommodation. Activities with an assimilative orientation fall under three headings, each of which take place in parallel with the child's level of cognitive development.

The first category is that of practice play. This describes the sensory-motor activity which normally takes place in the first year of life. During this period the child demonstrates repetitions of behaviours without actually being concerned with the impact of these variations on the environment. The results are consolidation or mastery of the initial learning, exploration of the

different ways of doing the same thing. The function of such play is pleasure as a result of feeling confident.

The term 'symbolic activity' refers to the second stage. Piaget was originally concerned with the union of the 'signifier' and the 'signified', whereby after the primary stage of the signification, an object symbolizes for the child something other than its primary symbolic nature. The signifier therefore stands not for itself but for something else. Symbolic activities can be characterised by two phenomena: firstly, the object is divorced from its primary and essential value; secondly, the treatment it is given varies according to the individuals needs and wishes. In other words a certain 'signifier' may be 'signified' with variations not only across children but also for a particular child across situations. The emergence of symbolic activity, it is suggested, occurs normally after the first year of life, it increases towards the age of four, and decreases as the child grows older. Symbolic activity is related to practice activity at the early stage and to games with rules at the later stage. The emergence and the development of this activity, it is suggested, runs in parallel with the pre-operational period.

The third stage is termed 'games with rules'. This occurs in parallel with the concrete operational period.

Piaget's theory provoked a number of developmental

studies amongst two groups of researchers. Those interested in play considered this analysis as a base for behavioural progression in children's play, emerging in the form of practice, and changing into symbol-making and rule system activities. Also it provided inspiration for those interested in the representational thought processes which might take place during signification/language learning. The studies within this theoretical framework are mainly developmental and those relating to play and its development use descriptive material. Experimental support is yet to be provided. In terms of the categorisation of play, there is lack of empirical evidence to show the validity of this hierarchical system.

Another cognitive theorist of play is Vygotsky. He was concerned with the development and functioning of higher mental processes. He suggested that the construction of the mental structures are based on the use of 'tools' and 'signs'. During the earlier stage the individual acts on the material environment. These 'direct actions' are gradually replaced by mediating technologies, which are, in other words, objects used as tools to act upon the environment in a more efficient way. However, practical problems in the social environment are also included, constituting the individual in the social matrix, understanding her/his position as well as the purpose for

one agent for another. In the early substitutions, the agent resembles the origin, but in later development the prototypicality becomes less important. This suggestion provided the basis for an extensive number of studies on symbolic play and also for studying the function of play in language learning (Fein, 1975; Watson and Fischer, 1977; Elder and Pederson, 1978) and problem solving (Bruner, 1972; Sutton Smith,1966, 1976; Sylva, 1977; Smith and Dutton, 1979).

As a marxist, Vygotsky might have been under the influence of Marx's theory. However, constructing this theory is a difficult job and disputable. Vygotsky himself failed to demonstrate the procedure or the way direct activity on the environment changes to tool using.

Since the child's individual consciousness rather than consciousness determined by the child's changing social relationships, was stressed, Vygotsky's attempt to embed the child in a social matrix came under subsequent criticism by Soviet psychologists.

The major problem was that Vygotsky did not live long enough to define his ideas or refine them. Those studies in which his suggestions received attention have not been translated (see also Rubin, Fein and Vandenberg, 1981).

their activities.

Vygotsky viewed play as a process through which these changes were brought about. He defined play as children's creation of imaginary situations. For him, play behaviour was not a by product of adaptive intelligence, but rather arose from affective-social pressures; in other words play is derived from real life tensions. The emergence of play is a function of desires which can neither be satisfied nor forgotten. It is intrinsically related to what the child knows about the world and the rules governing relationships in the original situation. Thus play is a highly motivated form of behaviour. Unlike Freud, Vygotsky was concerned with a more general tension system and described how play was derived from within the individual rather than from the immediate environment. Unlike Piaget, he believed that play in childhood was functional in cognitive development rather than merely a by-product of cognitive development (Vygotsky, 1967, 1978).

In language learning Vygotsky considered that play serves as a mediating process during which the external structure of the word-object becomes the 'object of action'. This gives birth to the higher mental processes during which things must become 'objects of thought' and 'practical action' must become mental operations. The central event which makes this separation possible is the substitution of

Recent theories of play

Recent years have seen the development of four major theories of play. One is known as the 'arousal' theory and derives from earlier behavioural learning theories (Berlyne, 1960, 1966; Ellis, 1973). The second focusses on play as communication, deriving from an anthropological stance (Bateson,1955, 1956). Another school emphasises 'cognitive adaptation', focussing on play as a source of variability (Sutton-Smith, 1966, 1967, 1976; Bruner, 1972). The fourth body of theory is referred to as 'ethological'. This involves studies of human and non-human animals, both from the evolutionary point of view and using the concept of observable behaviour (Smith and Connolly, 1972; Blurton Jones, 1972a).

The arousal theory of play

Drive theorists related learning to the association of stimuli with responses which are based on the basic needs of the organism responsible for its survival (e.g. hunger and thirst). Such other behaviours as play and curiosity were

regarded as 'unnecessary mentalistic fabrications' (Rubin, Fein and Vandenberg, 1981). Yet, while studying animals such as rats and monkeys, it was observed that the need for exploring a new environment appeared to be stronger than hunger or thirst.

These findings provided the basis for such concepts as manipulatory and exploratory drives. The fundamental assumptions of drive theory refer to consummatory behaviour with a physiological or biological basis and these are viewed as instrumental responses. The motivation of these responses is external and they are driven by tissue needs. Intrinsically motivated behaviour on the other hand serves the central nervous system. Berlyne suggested that as the organism seeks information until its central nervous system reaches the optimum level of arousal, to obtain specific information an organism needs to explore the sources of arousal. This is termed 'specific exploration'. When the environment loses its novelty, the level of stimulation drops below the optimum level, the organism gets 'bored' and tries to seek stimulation. Berlyne lablled this kind of activity 'diverse exploration', which helps to decrease the arousal motivation.

He regarded play as diverse exploration, functioning to decrease arousal motivation. His contribution is to draw attention to the motivating mechanisms of play.

Ellis (1973) suggested an alternative to Berlyne's theory, that play functions to increase both stimulation and level of arousal. The difference between Ellis's and Berlyne's models of play can be seen in the kind of responses made. In Ellis's model an organism 'seeks' stimulation whereas in Berlyne's model an organism responds to 'produce' stimulation.

A third kind of arousal model comes from Hutt (1979). In this model, arousal motivation goes in cycles from 'too much' to 'too little'. The result of both of these extremes is a lack of play behaviour. When arousal motivation is at a moderate level, the activity which takes place in response will be either ludic (symbolic play) or epistemic (problem solving).

A fourth model was suggested by Fein (1981) in which play is viewed as a response-orientated activity served by a moderate level of arousal, which is not based on a particular stimulus in the environment. The environment is familiar and there is an absence of biological needs and social demands. An organism produces a new situation in a familiar environment. This may produce uncertainty, associated with negative affect. This results in the organism attempting to achieve mastery over the situation by acting on it, thus achieving positive affect. The action may be repetitive but appears with variations in both

stimuli and responses; when variation in the responses is exhausted, play stops. This form of repetition is called the 'boost/jag' mechanism and serves to explain why play often appears repetitious over a long period of time.

Play as communication

Bateson (1955,1956), under the influence of the principle of number and logic theory, was interested in identifying sources of metacommunication. He identified play behaviour as one of such sources and linked metacommunicative features of this activity to the aspects of the communication system which foster abstraction. Abstraction on the other hand can result in ambiguity and paradox. He distinguished between 'mistake' and 'confusion' and suggested that when there is a close correspondence between 'signal' and 'referent', there may be mistakes, whereas commenting on a comment may result in confusion. Bateson drew his speculations on play from Russell and Whitehead's theory of logic, distinguishing between classes of things and classes of classes (Hawkins, 1964). He describes how a self-referent statement may cause confusion and paradox. For example in a play fight, 'the playful nip denotes the bite, but it does not denote what would be

denoted by the bite'. He described the relationship between communication and metacommunication to be comparable with the perceptual relation between text and context. He referred to play as metacommunicative context to the text of reality which gives birth to the cultural and personal images of the individual.

This suggestion provided the basis for a psychological perspective on the function of play and fantasy, in cognitive development during childhood. The resulting studies mainly concentrated on the role of fantasy play in the development of specific skills in terms of conservation, I.Q tests, divergent and convergent problem-solving. Bateson believed that children do not learn about the roles they take in their fantasy play but they learn about the concept of the role: in other words, play aids learning about learning. A number of further studies resulted from his theory including the way non-human animals communicate in play (Van Hooff,1972); an anthropological study of the communicative aspects of play in some cultures (Geertz, 1972; Schwartzman, 1976; 1978), and psychological studies on communicative aspects of children's play (Garvey, 1974; Sutton-Smith, 1976).

Chapter 1:Play theories.

Play and adaptive plasticity

Some recent theorists have focussed on the importance of play, in 'adaptive potentiation' and behavioural flexibility. They view play as a process which allows the child to discover new behavioural combinations, ideas or strategies within an array which may become useful in different contexts (Sutton-Smith, 1966,1967,1976; Bruner, 1972).

Sutton-Smith has focussed on the 'as if' characteristic of play. He emphasises the importance of substitution whereby children treat things or people 'as if' they were something else. In this process, children learn how to break free from 'established' ideas, and instead regulate their own. This aids the development of divergent thinking abilities (Sutton-Smith, 1966, 1967), and also provides the individual with freedom to 'frame' and 'reframe' and to engage in role reversal (Sutton-Smith, 1976, 1978).

While Sutton-Smith emphasised the contributions of play to the development of alternative symbolic constructions, Bruner (1972) focussed on the function of play in the development of behavioural flexibility of motor skills. He also concentrated on the 'as if' process of play,suggesting that in the play situation the child pays attention to the means of his/her behaviour and dispenses with concern for

its end product. In this process, the individual creates novel behavioural combinations and practices. This flexibility of play behaviour may help the development of tool using strategies.

Following on from Sutton-Smith's and Bruner's notions of play, other psychologists have developed their own conceptualisation of play, suggesting that it is one aspect of a broader developmental rhythm, including exploration and application (Vandenberg, 1978), or that play and fantasy may serve the development of adaptive thinking (Singer and Singer,1976). Drawing from Sutton-Smith (1968), the importance of play for the development of associative fluency was examined by Dansky and Silverman (1973,1975) and by Dansky (1980a). Bruner's work led to further research on the role of play in the development of novel tool using abilities (Sylva, 1977; Smith and Dutton, 1979; Vandenberg, 1981a). These studies suggested that play is functional in problem solving. However, contradictory findings have been claimed by Simon and Smith (1983). This study in which 64 children (33 girls and 31 boys) participated in two groups of play and training did not find superiority in favour of play activities.

Chapter 1:Play theories.

Ethological Studies of play

There are a number of psychologists who believe that play can be objectively defined. The central interest in each of these studies may vary but they share the idea of an objective approach to play behaviour.

Ethologists basically focus on organisms' behaviour in their natural environments. They have attempted behavioural definitions of play as being describable in anatomical terms and consequently allowing for interspecies comparisons. They have therefore focussed on the objective and measurable aspects of play behaviour. The commonly shared characteristics of these studies, as Harris (1976) pointed out, are the investigation of principles of organisation or structures that exist, not in the mind of the child, but outside it. The assumption is that once a child is provided with toys whatever s/he resolves to do with them is play. This kind of approach to behaviour of both human and non-human animals is often used when considering the function of a behaviour as it occurs 'naturally' in its social and ecological context. It emphasises the importance of 'descriptive', 'observable' and 'naturalistic' research, preferably in anatomical terms. According to Blurton Jones (1972), ethologists ask a number of questions about behaviour categories, such as: What do we mean by this? How do we know when we see it? Is it one thing or more than

one, or nothing at all?'.

Early examples of this type of approach can be seen in the work of Charles Darwin (1872), in describing laughter and smiling. More recently this method has been developed and applied to the study of human behaviour (Blurton Jones, 1972 a,b; Smith and Connolly, 1972). It contrasts two approaches: 'etic' and 'emic'.

In the 'etic' approach the obsever uses a behavioural classification which defines the overt behaviour of the organism, regardless of mental processes. This approach has been regarded as being 'scientific' and 'publicly agreed', simply because it is possible to obtain inter-observer agreement (see also Smith and Sluckin, 1980).

A major criticism of this method is that the overt behaviour does not always correspond to the covert behaviour (Smith, Takhvar, Gore and Vollstedt, 1985; and see chapter 8 in this thesis).

The 'emic' approach relies upon verbal communication and negotiation. It is criticised as being subjective and rather private and influenced by the emotions or attitudes of the actor and thus as being impossible to judge reliably

Chapter 1:Play theories.

Definitions of play

Despite the long interest in play since the 1800's, the definition of play still suffers from ambiguities. Actual studies on this aspect are very few. In earlier times play was considered as on a continuum in the opposite direction from work. Work was viewed as being a serious, beneficial, productive, holy activity, an extension of God's designs, and play as non-serious, ludic behaviour.

In modern days, the view is changing and scholars from different directions have attempted to define play. Some have reached the conclusion that this term is impossible to define (de Koven, 1978). Some others have attempted definitions and spawned further interest and effort in this respect.

To examine children's interpretations of play, King (1979) approached kindergarten children while they were engaged in an activity during nursery hours. Children were observed and later questioned on whether their activities were 'play' or 'work'. She reported that children in her study defined those tasks or activities assigned by the teacher as 'work' and those activities which children enjoyed most as 'play'.

In a similar study with older children (aged between 5 to 11), based on the question of how children conceive of the term 'play', Chaille (1977) reported that children

perceived those activities required by a teacher as work and others as play. Perhaps comparing both adults and children in their definitions of this term could be interesting.

A number of criteria have been suggested by researchers on play and different models based on these criteria have been developed (Krasnor and Pepler, 1980; Rubin et al, 1983; Smith and Vollstedt, in press).

A brief discussion on these criteria follows:

a) Play is intrinsically motivated

This has been interpreted as meaning that play is a spontaneous, 'don't have to' activity, voluntary and pleasurable, but distinguishable from consummatory behaviour governed by appetitive drives or by compliance with social demands or tasks. This notion is found in quite a wide range of theoretical writings (as early as Spencer's) and also in contemporary views.

b) Play involves attention to means rather than ends

Piaget (1951) viewed play as pure assimilation or primacy of assimilation over accommodation. This view is interpreted as attention to means rather than ends ('means' as 'process' and 'ends' as 'products')(Bruner, 1972; Garvey, 1977; Kestler,1964; Miller, 1973; Vandenberg, 1978; Rubin, 1981). This notion itself needs reconsideration in future studies and moreover, fairly to account for some characteristics of symbolic play. In symbolic play, the players adopt a certain theme and exhibit manners/behaviour appropriate to the role they take.

c) Play is distinguishable from exploratory behaviour

Studies concerned with exploratory behaviour have distinguished exploration and play. Exploration occurs when the object is unfamiliar or poorly understood and behaviour is dominated by such questions as 'what is this object'?. Whereas play takes place with familiar objects and behaviour is dominated by such questions as 'what can I do with this object?' (Berlyne, 1960, 1966; Hutt, 1970; Weisler and McCall, 1976).

d) Play is non-literal behaviour

Another distinguishing marker is the interpretation of play as pretend activity. For instance, when children are fighting in a play situation, it is not a real fight, but it is 'play fighting'. Furthermore, in object play they may give different meanings to the objects. Accordingly such play can be characterised as being 'non-literal'(Garvey, 1977a), 'simulative' (Reynolds,1972), and 'as if' activity representational set (Sutton-Smith, 1966, 1967).

e) Play is free from public rules

This feature is used to distinguish between play and games. Games with rules have been suggested as one stage in the development of play (Piaget, 1962), following on from symbolic play when the concrete operational stage of cognitive development has been achieved. Although sociodramatic play, for instance, requires some rules amongst the participants which govern the individuals' relationship in play episodes (Garvey, 1977), these are rules private to that game, and not the same as public rules in games.

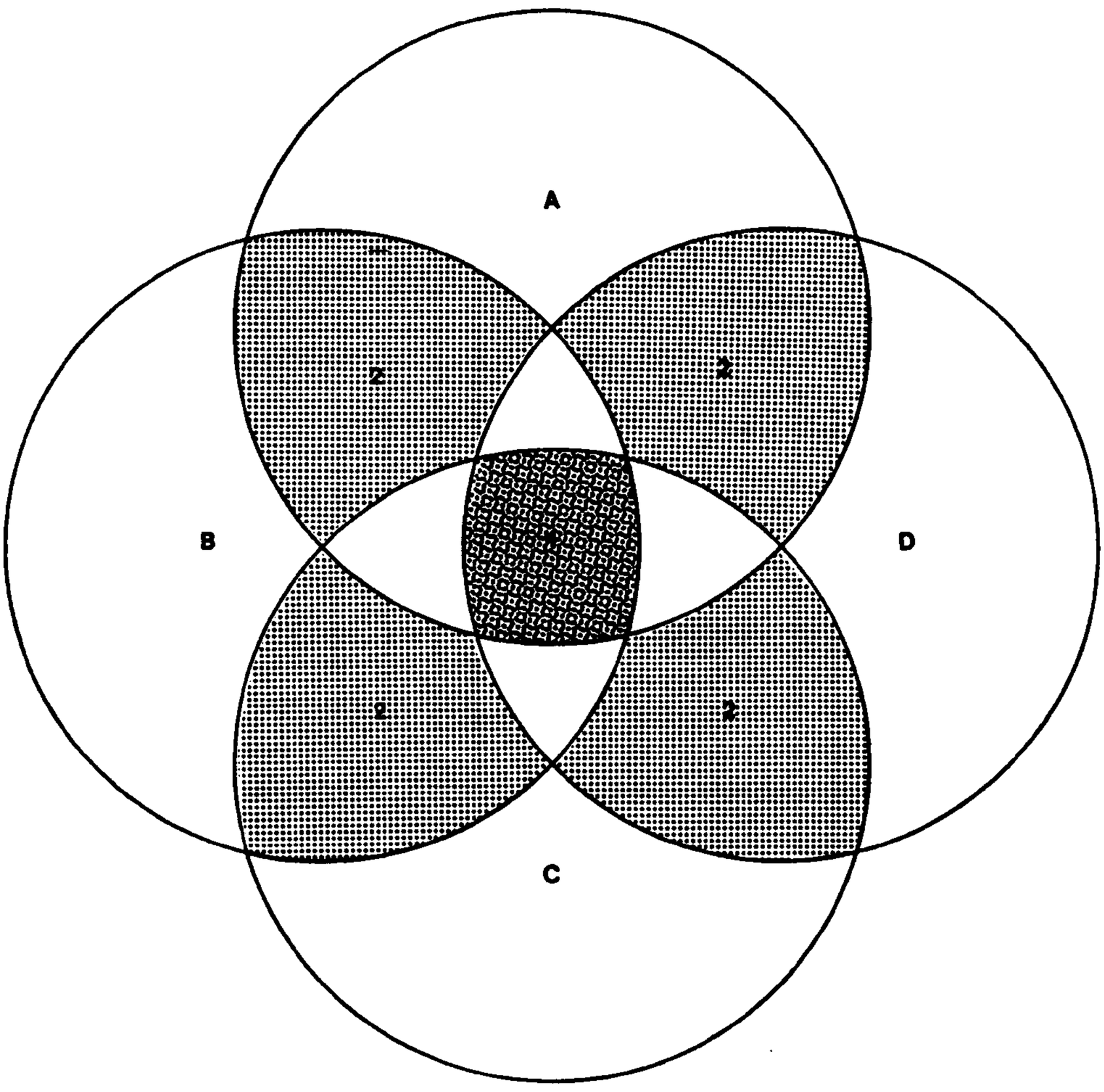
f) Play is actively engaged

Play has been described as an activity in which the player engages him/herself actively. This serves to distinguish play from boredom or day dreaming.

A specific model of the definition of play has been suggested by Krasnor and Pepler (1980). Play activities are characterised by four criteria, namely flexibility, intrinsic motivation, non-literality, and positive affect (see Figure 1).

Figure 1

In the following model A, B, C and D represent different play criteria. If all four apply (area 1) this is 'pure play'. If two criteria apply (areas marked 2) this is less playful, but more so than if no criteria are present. Adapted from Krasnor and Pepler (1980).



Chapter 1:Play theories.

The above mentioned criteria, in addition to the 'means/ends' characteristic of play were examined in a very recent study by Smith and Volstedt(in press). In this study 30 minutes of children's activities in various situations were video-taped. The activities were broken down into short episodes. They were then shown to 20 adults, who decided whether each episode was play, or not play. Then further subjects viewed the film and applied one of the five criteria to the appropriate episodes. Each criterion was scored by 10 subjects. The result suggested that amongst the five criteria, intrinsic motivation did not correlate with the other criteria or with 'play'. According to this study 'play' could be distinguished by the four remaining criteria. The general model of Krasnor and Pepler was thus confirmed. With the presence of: one criterion 48%, two criteria 73%, three criteria 89%, and four criteria 100% of play episodes were distinguished. Amongst the four criteria 'non-literal' was the most highly associated with play.

The major problem with these models of play is that suggested criteria are mainly based on observational data and the findings are not supported by any experimental evidence. Some of the criteria are in fact a product of the investigators' interpretations (e.g. attention to the means rather than the ends). Moreover, recent studies indicate

the need for an alternative method or the use of a complementary method together with observational data when studying children's play (Smith et.al, 1985). There has also been evidence to suggest that it is sometimes the case, that although the child may be seen as being actively engaged in an activity, which the observer may well be satisfied to record as 'play', nevertheless talking to the child may establish it as being not 'play' but a necessary 'work'(see chapter 8).

Another crucial factor is the fact that since play has not been clearly defined, deciding for a type of activity whether or not it is play, and also the use of such play criteria, appears to be an attempt to employ subjective judgments when collecting observational data, which in itself appears to conflicting with the fundamental principle of ethological techniques as defined by Connolly (1973).

'The investigator has to classify behaviour into various discrete categories largely on an inductive basis. His past experiences and perceptions will inevitably influence the taxonomy which is developed, and working with one's own species may not be an advantage. Fundamentally the observer takes account of common causal factors, common consequences of behaviour. It is important to avoid subjectivity in the categories distinguished'(K.J.Connolly, 1973.p 222).

Chapter 1:Play theories.

However, as play is mostly practised during childhood, perhaps children themselves could provide a means to define this behaviour or at least to illuminate how far and to what extent they share adults' views. Until we can know what children themselves feel about the orientation of their play activities, firm conclusions can-not be drawn.

GENERAL AIM OF THE STUDY

Studying children's play is problematic, since there is neither a precise definition of the area, nor universal agreement as to the characteristics of activities which might be classified as play. However, taking account of previous studies and the way they approached play, it appeared to me that perhaps a different approach might prove more appropriate. I felt-that consideration of an increased number of variables was required. Also it seemed necessary to free oneself from prior assumptions, in thinking about the importance of play. Accordingly, I concerned myself with looking at 'free activity choice time', for periods of 20 minutes in each individual case, and examining its content with several questions in mind. I referred to those non-consummatory behaviours, which were not assigned by adults, and in which children took active participation spontaneously, as 'play', and 'non-play' as all other behaviours. It was hoped that this approach would enable the different aspects to become apparent in a clearer way, to reveal the time spent on each aspect, and to focus on each category in terms of the others. The approach resulted from the proposition that if play is at all significant in

learning and development during childhood, its level of significance will be dependent on the mutual interaction between Individual and Developmental factors.

Individual factors consist of the time the individual spends in play, the play partner(s) s/he prefers most to play with (in a social environment), and the type of play s/he prefers most. The exact amount of time the individual child invests in preferred play is crucial when deciding on the importance of play, and it hardly needs saying that not all children may benefit from play equally.

Developmental factors consist of the opportunities 'play' offers children. Even if play is fruitful in facilitating learning and development, not all kinds of play are likely to serve children equally well.

RESEARCH QUESTIONS

The present thesis is an examination of the 'context of play', and especially 'dramatic/fantasy play' in a small number of children in a nursery group.

Eight children (4 boys and 4 girls) contributed to a longitudinal, developmental research study on children's play behaviour. In practical terms, the available time limited the number of children who could be concurrently observed in detail. Also, in such an intensive study, the size of data could compensate for the small number of subjects. More detail in this respect, in terms methods,

and the appropriateness of the method of observation, are elaborated upon in CHAPTER 2.

CHAPTER 3 gives a 'play profile' of each individual subject, comprising such descriptive materials as: the case history (birth order, home background etc,), teacher's assessment, mothers' attitudes, and extra information obtained by the investigator during or after the course of the study (but before preparation of the thesis). This is followed by a data based analysis, focussing on the amount of time each individual spent on each aspect of the 'free activity choice time', and what s/he preferred to do most.

CHAPTER 4 examines the developmental significance of play. Conclusions are drawn from the tabulation of the various aspects of the 'free activity choice time' in terms of social participation, verbalisation, and level of complexity. This provides a picture showing how well each type of play serves children in social/verbal communications and complexity of behaviour.

CHAPTER 5 focuses on the relationship between play partner and type of activity. Consideration is also given to the most preferred play partner, type of activity and age relationship between preferred partner and type of play activity.

CHAPTER 6 draws attention to developmental changes in the play behaviour of the children. The nine month period

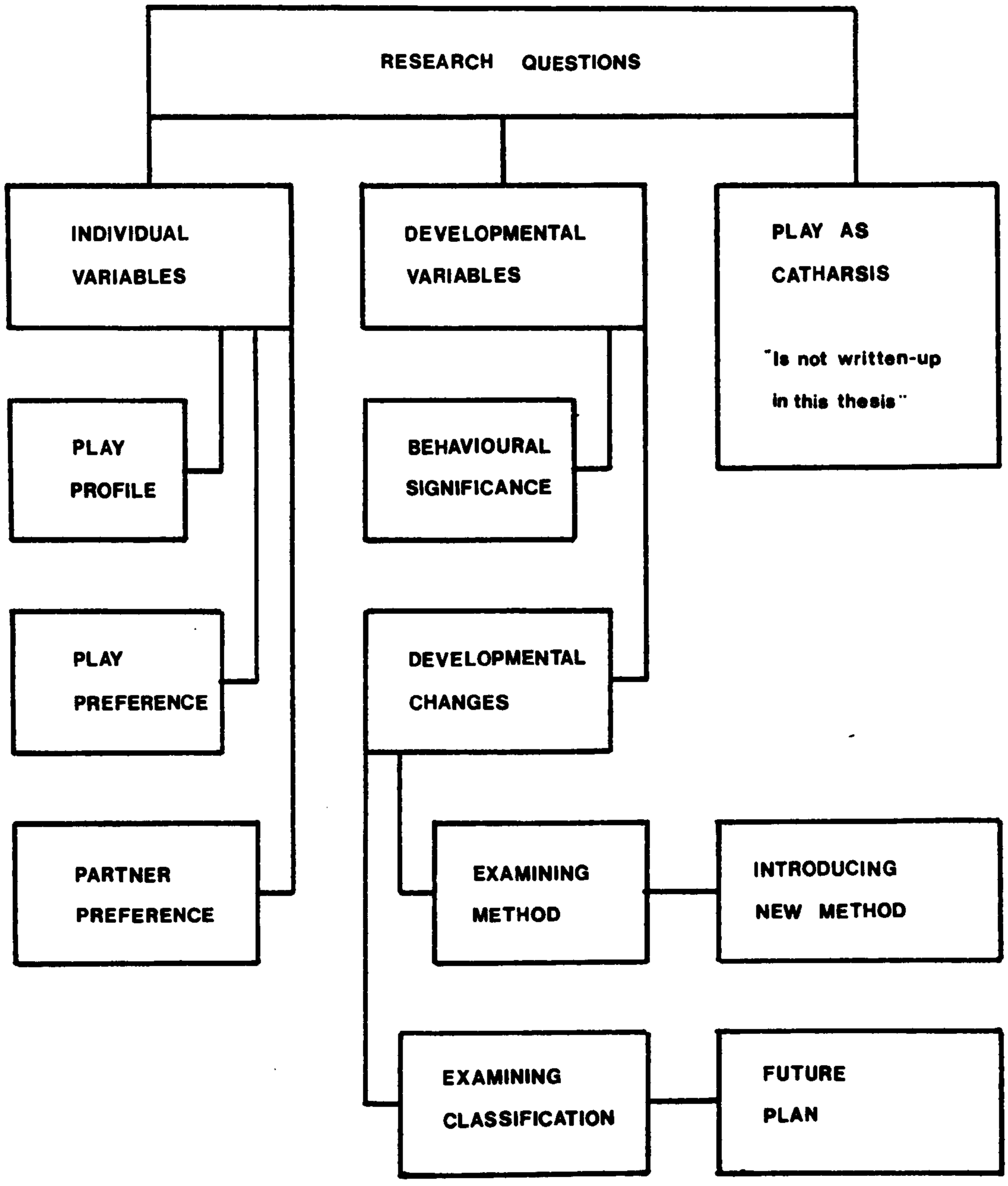
during which the collection of the observational data was carried out, is divided into 5 time periods, each of 600 data entries based on 10 days observation, in terms of which changes in types of play were examined. Statistical analysis of the data resulted in findings which did not support some of the suggestions made in the existing body of literature. Subsequent consideration was given to the scheme of classification, and the methods used in this study.

CHAPTER 7 considers the validity of the classification of play. Smilansky (1968) devised a classification system, used in this study and in a number of studies before it, to measure the cognitive content of play. Previous studies managed to obtain high reliabilities when they used this classification system, as did the present investigator. Nevertheless, high reliability does not necessarily guarantee the validity of the scheme. The book in which Smilansky proposed this classification does little to justify the scheme, but she refers to the work of Piaget, Valentine and Isaacs as suggesting this category scheme. Smilansky's scheme is compared with its claimed derivation.

CHAPTER 8 concentrates on the reliability of the method of observation used in studying children's play. A cross-tabulation is made of two sources of information: one based on the observers' decisions, and the other on the

interpretations made of the information given by children about their actions in response to questions about what they were doing. It is concluded that the extent to which the two sources of information agreed in making decisions about types of children's activities was no better than chance level.

The following table provides a summary of the questions addressed in the present thesis. As is clear from the organisation of the thesis, each chapter deals with questions relatively independent of those considered in other chapters, except for chapters 7 and 8 which are both based on the findings of chapter 6. Accordingly, relevant literature has been reviewed at the beginning of each chapter.


RESEARCH QUESTIONS
INDIVIDUAL VARIABLES
DEVELOPMENTAL VARIABLES
PLAY AS CATHARSIS
"Is not written-up in this thesis"
PLAY PROFILE
BEHAVIOURAL SIGNIFICANCE
PLAY PREFERENCE
DEVELOPMENTAL CHANGES
PARTNER PREFERENCE
EXAMINING METHOD
INTRODUCING NEW METHOD
EXAMINING CLASSIFICATION
FUTURE PLAN

CHAPTER TWO

METHOD

When studying behaviour, there are a number of possible methods and techniques, each of which has its own advantages and disadvantages. Research findings in the behavioural sciences fall into two major categories: Experimental and Observational.

In order to carry out a piece of research which can justifiably be called 'experimental', the examinee should be under tightly controlled conditions so that some aspects of behaviour may be modified. As the circumstances are unnatural, the results obtained may not be applicable to other sets of circumstances and therefore generalisability is open to question. Moreover, the experimenter is relatively limited in that s/he can only examine a small set of dependent variables. However, in many studies the experimenter may not wish to exert such control over the phenomena s/he is examining or s/he may not be able to do so for some practical or ethical reason.

Perhaps the most important criticism of much laboratory research is the fact that the human examinee(s)

participating in such experimental studies tend to make their own interpretations of the demands or aims of the experiment, thus producing responses which they feel to be appropriate or desired. In other words, the result of the experiment may well be influenced by either the hidden or the overt bias of the examinee.

At the same time, experimental studies may carry with them certain important strengths. In experimental studies there is an emphasis on the clarification of the variables under examination by the experimenter. Because of the tight control over the independent variables the effect on the dependent variables can be perceived clearly; in other words the questions of 'cause' and 'effect' may be answered. The analysis of such studies tend to be much stronger than with alternative methods, since the associated factors are fewer in number and controlled. If the investigation seeks to test a refined hypothesis or detailed prediction the experimental method appears to be the most suitable.

An alternative method to experiment in studying behaviour (human and animal), is the non-interventive method. Systematic observation has been used since the work of Darwin (1872), but the heyday in the use of this method by both psychologists and zoologists appears to have been in the 1920s and 1930s.

After this period human psychologists tended towards

the controlled experimental approach. Although observational methods, particularly in child development, now appear to be popular again, until recently only as few as 8% of studies in this field have been reported as using this technique (see Hutt & Hutt,1978 for further detail). The decline in the use of observational methods has been due to the following factors:

Because direct observation does not control the 'cause and effect' relationship, the interpretation of results seems ambiguous. In a non-interventional study although the investigator may avoid the use of an artificial situation, certain drawbacks inevitably limit the inferences from analysis of such data. Since the data is based on the observation of an uncontrolled situation, the likelihood of its providing a clear picture, showing the relationship between the variables, is low. These criticisms have been noted by ethologists themselves (Blurton Jones, 1972b; Hoving et al,1974).

On the other hand, the direct observational method was devised to describe the life situation of the individual and to study those aspects of behaviour which are unlikely to be produced under laboratory conditions (e.g. aggression, affection). It was also used to show sequential dependencies amongst different items of behaviour and to corroborate laboratory tests (e.g., in personality studies)

(see also Wright,1967 pp1, 64-65).

In the study of behaviour by direct observational methods any bias of the investigator will tend to influence both findings and the interpretations.

External and internal validity are the two main factors which differentiate between the two methods. 'Internal validity' refers to whether the conclusions of a particular study are justified. 'External validity' is a term which refers to whether a given result can be generalised to other situations.

In the laboratory situation the internal validity of the sample is high, but external validity is low; whereas when using observational data, internal validity is low, conversely external validity is high.

The direct observational method in studying behaviour may be subdivided into two approaches: the 'ethological' and the 'ecological'. There are certain differences between the two approaches. Firstly, ecologists concern themselves with the 'unit of behaviour', that is, a sequence of behavioural events lasting several minutes, with the prime concern being the end product, e.g., 'going to the park'. This activity is not broken down but treated broadly. It is goal/end oriented and the question of the duration of the action is disregarded.

The ethological approach describes, to a larger extent,

molecular or small scale gestures or postures. No goal/end is used in defining the behaviour. The ethological approach is characterised by four inter-related issues: the evolution, ontogeny, causation and function of behaviour.

Methods of sampling

There are several possible methods of behavioural sampling: continuous sampling refers to the method of sampling in which the subject is being observed continuously and all behaviour is recorded against an onset and termination time-base.

Another method of sampling which is widely used is interval/time sampling. In this method the subject is watched continuously for a certain period. This period is broken into intervals of fixed and equal lengths. Each behaviour or item of behaviour under observation is noted once in each interval. The use of this technique started with the diary study tape records of Barker (1930).

A longer time interval was used in earlier studies,e.g.Olson (1929) employed a 5-minute interval, so did Parten when she studied social play (1932). But later studies used shorter intervals of 10 or 15 seconds. The length of the intervals, however, is largely determined empirically by the investigator(s) according to the demands of their observation(s). The shorter the interval, the more

representative is the sampling.

As already shown in this chapter, when comparing the two methods (observational and experimental), problems with external validity in experimental studies are more obvious, but moving downwards to the less controlled methods, the balance tips in the opposite direction. In order to increase the internal validity of observational data, it is always possible to exert a control of some sort by using sampling techniques in collecting data. Time sampling is a controlled observational technique particularly relevant when looking at individual differences and when using a check list.

With regards to entries of data, there are three tactics by which entries of the item(s) of behaviour may be recorded: entries may be recorded as the stop watch passes the time interval, recording either the terminated activity, the behaviour just started, or the predominant activity. The first two tactics are more open to objections than the last one. The most significant differences are reported to be concentrated on the area of reliability assessment (Cockrell,1935). The predominant activity sampling system with 10 or 15 second intervals is claimed to be the 'most feasible' one (Hutt and Hutt,1979). In this technique, the problem with the longer time interval is primarily that of storing the items of behaviour and deciding which item was

the predominant one.

A criticism of both check list and event recording is that both presuppose the formulation of well-defined and clearly delineated behaviour categories, which in turn presuppose more than a superficial acquaintance with the data.

Other methods of sampling such as recording a spoken commentary on magnetic tape, video tape, and motion picture have been used in previous studies. Each one of these methods has certain advantages over the others depending on the demands of the study. The appropriateness of the method needs to be decided by the investigator during the preparatory period of acquaintance with the subject of study.

Reliability

A crucial factor in observational studies is the reliability of the results. Reliability testing takes into account behaviour complexity, variability and rate of occurrence. In the light of the importance of reliability the investigator must consider certain points which have been emphasised in previous studies (Arrington, 1943), as follows:

Ambiguities

The behaviour under observation must be clearly defined. If the categories upon which the observation is being based are not defined in precise terms or the pattern of behaviour is not clearly described, scoring becomes difficult and inconsistent. This may be the cause of discrepancies and inconsistencies, not only amongst independent observers but also within the data collected by a single observer.

Number of behaviour items

Reliability of results tends to vary depending upon the number of behaviour items observed by the observer simultaneously. The fewer the number of categories observed at a given time, the more reliable is the data (Hutt and Hutt, 1979).

Number of subjects observed simultaneously

Clearly the greater the number of subjects under observation at any one time the greater is the risk of inconsistency (Arrington,1939).

Observer's bias

The observer may be influenced by his/her expectations in relation to any hypothesis upon which the research has been designed to test.

Testing for reliability

The reliability of observational data can be assessed in several ways: split halves, inter-observer reliability and intraobserver consistency.

Split halves

Using this method, the data is split into two halves. Correlations may then be obtained between the halves. This technique can only be used where behaviour is reasonably stable. It is probably more suitable in the experimental setting. Another way of calculating the reliability of the single observer is to examine, say, the odd and even days for individual subjects and then run correlations.

Inter-observer reliability

One method of checking inter-observer reliability is

few different observers to record behaviour using the same definitions. Agreement may be calculated either as A/(A+D) or A/(A+D/2). These formulae are widely used when reliability is reported as a proportion or percentage of agreements.

Intra-observer consistency

The observer's objectivity may change over a period of time. A longitudinal study in particular may face this problem. To check on the consistency level, one method is to record a part of the data, using a video recorder, with the advantage that the film can be re-examined and scored again at any further time.

The concept of validity is often used as though synonymous with reliability (Arrington,1943). It is based on the factors which are important in observational methods: 'naturalness' of the behaviour observed, accuracy of recording, representativeness of the sample. In studying behaviour, using an arbitrary classification and definition, high reliability may be obtained. If however, as is usually the case, classification and definition happens to be suffering from subjectivity or ambiguity, any inference from 'reliability' to 'validity' must be treated with caution.

Thus reliability does not necessarily guarantee validity. Unless the relationship between the overt and covert behaviour is fully understood, definition or classification based on the observational data is neither clear nor strong enough to the relationship between reliability and validity.

Pilot study

A behavioural scientist, beginning his/her studies of any kind (experimental/observational), with any species (human/non human animal), requires a preparatory period of acquaintance with the demands of the study. This preparatory period or pilot study has several functions: to minimise disruptive behaviour, to maximise the accuracy of the recording, and also to examine the suitability of the method and the equipment to the needs of the study. Particularly in observational data and factorial design, if the number of variables are more than one or two an extensive period of pilot study is required. This enables the observer to familiarise him/herself with the environment and subjects and also accustom him/herself to the method and application of classification and its application.

Method and procedure

For the aims of the present study, experimental methods did not appear to be appropriate. Systematic observation, using the time-sampling technique with a 10-second interval,

appeared to be particularly suitable and so this technique was employed.

By this method the frequency of occurrence of different activities could be recorded in their natural environment. Furthermore, as the study concerned itself with children's undirected preferences, direct observation could play a unique role. The use of time-sampling helped to increase the internal validity of the data, as the observer, subject and observation were all subject to control (Arrington,1939,1943). Nevertheless, there are some undeniable drawbacks in this method, as will be discussed in chapter 8.

In respect to the structuring of observation, studies of children of different ages may be cross-sectional or longitudinal. The findings of cross sectional studies may fail to clarify the effect of early experience on later development because of the inherent limitations of this method. However, using the longitudinal method, this can be estimated. Since the present study concerned itself with developmental changes in the play behaviour of individual children, the longitudinal method was therefore seen as preferable.

The pilot study

The research design in this study required extensive experience and preparation. Therefore I spent a four-month period in a pilot study, for the following reasons: firstly, because I was intending to use a number of categories for the purpose of looking at as many variables as possible, I needed to gain experience of using the categories without difficulties. Secondly, refinement of my behaviour in the nursery environment was deemed crucial. It was seen to be vital that I should get to know most of the children, that is, the subjects and their partner/s if they were seen together during the observation. Thirdly, I needed to become familiar with the observational method and thereby find a suitable scheme and technique for the study. These included trying out the use of a video camera, tape recorder, event sampling and check list. It became clear that due to the size of the sample the use of video was impractical. The use of the video recorder, despite the advantages shown by Hutt & Hutt(1979), was found to be detrimental in this study, since such an activity attracted the attention of the children away from their play. Carrying portable video equipment around the nursery caused considerable comments and the observer's activities were monitored by the children instead of the other way round.

The tape recorder was also found to be a distraction. The children were attracted by it and were keen to use it themselves. For the purpose of recording clarity it was necessary to maintain a certain distance between the observer and the child. This distance between the observer and the subject was felt to be artificial and an impediment.

The use of spontaneous written commentary was also found inadequate in that it could not show frequently changing types of play behaviour. Therefore the use of a check list which could more closely reflect such changes was tried.

A combinatorial category system made up of several categories was adapted as serving the needs of the study. Resulting from the pilot study it was seen that 7 variables were relevant. After trying some alternatives, it was concluded that a 20-minute period of observation was long enough to show changes in activities as it was rare for an activity episode to be longer than 20 minutes. This observation period was divided into 10-second intervals. A ten-second was spent in observing children and another ten-second was spent in recording data. It is interesting to note that in previous similar studies longer time intervals were used. Parten(1932) used 1-minute intervals; Goodenough, studying six specific aspect of behaviour of 3

to 5 year olds, split one minute of observation into 15-second intervals (Hutt & Hutt,1978).

The Nursery School.

The Mushroom Lane nursery school is located in the lower ground floor of the Department of Psychology. The nursery is directed by the Local Education Authority and the facilities are provided by the Department of Psychology of Sheffield University. The nursery can cater for two groups of 3 and 4 year old children in morning and afternoon sessions.

Generally speaking children after their 3rd birthday may take advantage of nursery education where available and begin their compulsory education the term before their 5th birthday. In each session a group of 20 children attend, roughly divided between boys and girls. Children from a variety of backgrounds come to the nursery school mainly from a local catchment area.

Space and the environment.

The fully carpeted area in which indoor activities take

place comprises a rectangular play room which is airy, well lit with two wide windows providing a panoramic view of trees and a grassy open space where sport activities take place. It is excellently equipped with toys. There are facilities for sand, water play and materials for a variety of manipulative and creative activities. There is a small hall which leads to the washing and toilet area, the nursery office, and a small adjacent, irregular-shaped room. This room could be used for different purposes such as 'office', 'corner house', 'kitchen/dining room' for children to play in, with a variety of play materials. Children were free to play outside, subject to weather conditions.

Nursery staff and routine.

The nursery staff consist of one qualified nursery teacher and her assistant, a nursery nurse. The morning session lasts from 9.00 to 11.30 a.m and the afternoon session from 1.00 to 3.30 p.m. Children are brought to the nursery by their parents (mostly mothers) who soon after leave the nursery. If a child is a new comer, the mother would remain as long as necessary, perhaps for one or more sessions.

There is not a pre-arranged time-table or pre-determined programme as such for the children to follow.

The staff see it as important to direct activities as little as possible. Direction, of course, does take place in what is provided. Staff would suggest or encourage an activity should the child appear to be in need of this. Obviously they would intervene to avoid physical injury but otherwise would tend to act as onlookers and stay back. They do not have a set routine for each nursery session.

Some children on starting nursery may need guidance or help in choosing what to do. However, they are encouraged to organize themselves by the teachers' assistance. The teachers believe that children gain a lot more from activities which they choose themselves. For a short while after starting nursery school, encouragement is always given to those who seem to need it in order to develop their interests; otherwise they were not directed to any specific type of activity. In other words they are helped to discover their particular interest by which they can extend their own mental and physical capacities.

Thus, the teachers impose a structure only in as far as they choose and set out the materials and equipment. At the start of each session they provide materials for a well balanced range of activities which normally include:

Indoor activities and materials.

Fantasy play: some toys or play materials which lend themselves to fantasy play such as an old typewriter, assorted clothes, hats and dresses are put out occasionally. Thus at every session there are objects which would tend to inspire dramatic play. Other such materials would include blanket, chairs or furniture, domestic toys, etc which would be adopted by children in their play.

Natural materials: clay, sand, gravel are provided for children to play with each day.

Paint: a wide choice of different types of paint and brushes, different surfaces, pen packs and various kinds of papers are provided each day.

Cookery:this activity is undertaken once a week. For special occasions the children may have an extra session preparing such things as cakes, sweets and biscuits under the teacher's supervision.

Water play: facilities for this such as pipes, containers of different shapes and sizes are provided, thus leading to constructional play. The water may be coloured by adding paint or children may blow bubbles after adding a few drops of washing-up liquid detergent. Such activities can easily become fantasy play; for example, by the provision of animals or toy figures.

chapter 2: Method

Out door activities and materials.

Out door activity is subject to the weather conditions and varies accordingly. If the weather is good enough a group of children may wish to go out, whilst some may still wish to stay indoors. In this case one of the teachers would take the first group out, leaving the remainder inside to carry on with their own interests. For outdoor activities there is a large concrete area in which children can play. In the center of the main area there is a small garden. The garden was planted under the teachers' supervision with children's cooperation. On one corner there is a good sized sand pit area for children to play in (see the diagram). At one end of this yard there is a shed in which play things for outdoor play such as: slide, cart, barrel, tubes, bicycle, tricycle, car, etc are being held.

Other activities and materials

Music and stories: there is always the possibility of listening to stories either on a tape or read by the teacher. Towards the end of most sessions one of the teachers will gather up those children interested to hear a story.

In terms of music, children have got the choice of listening to a tape or records or sometimes themselves playing any of a variety of musical instruments. Organised musical activities may take place, provided there is enough demand for it. It is not imposed on the whole group but is offered when asked for by the children who wish to participate.

Milk: milk would be set out about half way through the session but children may help themselves whenever they wish. The teachers ensure that by the end of the milk time each child has drunk its milk.

Themes/topics/visits.

The staff do plan for the children to work on certain topics themselves. The main aim usually is to encourage observation of the environment and also to get experience of it. For example, a display was set up of wooden things from which a discussion followed on what wood is and for what purposes it is used. The children may be asked to look at home for things made of wood and bring some of the wooden things to school. Other displays included, colour display, materials, clothes, etc. They were replaced every few weeks.

Observation of seasonal changes are usually going on. For example an aquarium showing the stages in a frog's life could be viewed through a magnifying lens. The stages in life of the butterfly and growth of plants, flowers will be arranged for the purpose of observation at the appropriate time of the year. These are normally accompanied by relevant pictures, books and stories. Children can witness the changes the whole way through. The were taken to various exhibitions on such topics as textiles, shells, 19th century costume and children's clothes down the ages. These exhibitions are sometimes to be seen at a nearby museum

where children from the nursery school often go on visits.

Lots of visits may be arranged, sometimes in connection with stimulation of play; for example, to hospitals, building sites and hair dressers. There are also regular visits to a farm where children can see lambing and milking. It is arranged now and then for the oldest group of children in the nursery to be taken swimming.

Subjects.

As I wished to observe the children for a period of 9 months, it was necessary to select subjects who would continue to attend for the whole period. Therefore a random selection was impractical.

The course of collecting observational data lasted two-and-a-half years (February 1981 to July 1983). During each period of 9 months 4 subjects (2boys+2girls) were studied. In total therefore, eight subjects, 4 of each sex, were chosen. The observer was quite aware of the disadvantages of a limited number of subjects but this number was a deliberate choice. It was decided to get a considerable amount of high-quality data on a few children, rather than less good quality data on a larger number of children.

In practical terms I decided I could spend approximately 100 minutes observation time per session for collecting data. This allowed 20 minutes observations for each of four subjects, plus five minutes break after each 20 minute period. Because of the settling down period at the start of each session and the unsettled period at the end of each session these were not suitable times for collecting data. In other words circumstances did not allow more than 4 subjects to be studied during each daily session, if 20 minutes observation per day was to be attained.

Alternatively, it would have been possible to examine the play behaviour of more than eight subjects for less than nine months. However, I considered the period of nine months to be the minimum requirement for looking at the developmental changes in the subjects play behaviour. It was hoped that a large number of data entries for each individual subject (3000 in total) would enable reliable longitudinal data to be plotted for each subject. Under the conditions in which this research was carried out this appeared to be the maximum effort which could be invested. I also compared this number of subjects with the number used in past studies and noted that investigations of a comparable length tended to focus on a very small number of children; whereas a larger number of subjects tended to be the focus of the cross-sectional studies. While 8 is a

small number of children, it was nevertheless felt that if all 8, or say 7 out of 8 children, produced a similar pattern (this being at or near conventional significance on a sign test), it would allow some degree of generalisation to be made to other children. At the very least, the design allows for a rich variety of hypotheses for subsequent testing on larger samples. Details of the subjects are given in Table 2.

The socioeconomic background of the subjects (according to the Registrar Genaral's Classification of Occupation, Office of Population and Surveys, 1970) was as follows: 2 children in classes 3 and 4 (children whose parents were skilled workers), 6 children in class 2 (children whose parents were from professional classes (see Table 2).

Amongst the eight children who contributed to this study, four of them are first born, three of them are second born, one of them is the only child in the family. Five of them had a younger brother or sister, two of them had an older brother (none of the brothers or sisters were present at this nursery school at the time of the study).

(Table 2)

Subjects	Date of birth	Date of entry	Age at entry month	No of siblings	Birth order	Session	parents occupation
gI	10.04.77	14.01.81	45	(1) older brother	2nd	morning	F (Carpenter), M (Housewife).
gII	07.01.77	17.09.80	44	(1) older brother	2nd	morning	F (Lecturer) M (Student)
gIII	07.01.78	16.09.81	44	(1) younger brother	1st	afternoon	F (Lecturer) M (Housewife)
gIV	19.01.78	28.09.81	44	(1) younger sister	1st	afternoon	F (Inspector of BR) M (Housewife)
bI	02.05.77	14.01.81	44	(1) younger sister	1st	morning	F (Journalist) M (Journalist)
bII	04.02.77	11.09.80	43	(1) younger sister	1st	morning	F (Lecturer) M (Housewife)
bIII	03.02.78	28.09.81	41	(1) older brother	2nd	afternoon	F (Lecturer) M (Housewife)
bIV	17.03.78	13.01.82		-	1st	afternoon	F (Businessman) M (Helping her husband)

chapter 2: Method

Data collection.

A general check list (example in Appendix A)was perpared consisting of 60 rows, each of which indicates 10 seconds observation. There were two phases in data collection procedures (A & B). Phase A was carried out for a period of 9 months: from 1st Feb 1981 to Oct 1981. There were 4 subjects (two boys and two girls). Phase B took place the following year, using exactly the same routine as phase A, but involving 4 new subjects. The data was collected by myself as non-participant observer and the parents of the children were informed about the research plan through a prior meeting.

Observational Data.

Sampling of children's behaviour was repeated 4 times a week providing the basis for analysis in the main body of research. Data collection was subject to the school term and the attendance of the subjects at the nursery school. Complementary information was obtained through such other sources as daily reports, and descriptive material.

Daily reports.

The nature of the data in this respect was based on a questionairre given to parents to fill in for each subject for every day. Information was gathered about the target

children from their parents, for the period from which the child left the nursery school until s/he attended nursery again (including school breaks and holidays). I received these questionairres back regularly. An example is given in appendix B. The question was whether, and in what way events outside the nursery environment affected the child's play behaviour. However, the investigator failed to analyse this interesting aspect of her study as a result of paying attention to the examination of method and classification, (see chapter 7 and 8), owing to the suggestion advanced by the main body of the present research.

Descriptive material.

The parents and the nursery teacher were asked to describe the target children. Other points of information not experienced by parents or teacher but learnt by the investigator during the course of observation were recorded as impressionistic and factual notes.

Equipment.

The equipment used in this study included pen and paper (prepared check lists), stop watch, and a dot timer. The stop watch hung around the observer's neck while a complementary audio aid (dot timer) was fixed to her belt

with its ear piece in position, thus hands were free to record. The dot timer was set at 10 seconds.

The data collection in both phases took place in Mushroom Lane nursery school. The children attended part time either morning or afternoon sessions. In phase A, data was collected during the morning sessions, between 9.15 to 11.30 a.m. In phase B, data was collected during the afternoon sessions, between 1.15 to 3.30 p.m.

The sample was taken from a distance from the child close enough to allow the observer to observe accurately, but not so close that the child should be aware of being observed.

The process of data collection began in February 1981 and continued throughout the school terms until the October 1983. For each of phases A and B, the study was subdivided into 5 time points as follows:

Time point 1 from February to March, 10 days observation, 600 data entries.

Time point 2 from April to May, 10 days observation, 600 data entries.

Time point 3 from May to June, 10 days observation, 600 data entries.

Time point 4 from June to July, 10 days observation, 600 data entries.

Time point 5 from September to October, 10 days observation,

600 data entries.

These provided a total of 50 days observation or 3000 data entries for each subject. Prepared check lists were used, each of which contained 8 columns for play variables, and 15 rows for data entries. Each row was used for recording a 10 second sample, thus each subject needed 4 sheets, to cover 20 minutes observation and 60 instances per observation day. The columns were headed as follows:

Play partner: up to three play partners were recorded in this column.

Type of activity: this column was used for recording the cognitive form of play categories as: no play, transitional, functional, constructive, dramatic, and games.

Complexity level: this column was used for the level of complexity which was recorded from level 1 to level 4.

Social participation: this column was used for recording the social form of play as: unoccupied, onlooker, solitary, parallel, associative, and cooperative.

Object: play materials used by the child during play were recorded in this column.

Dramatic/fantasy play: since dramatic play episodes had their own sub categories, they were recorded in this column, if they occurred. These were self agent, active other agent, active substitute agent, behavioural role and social role.

Verbalisation: four possible forms of verbalisation were recorded in this column, as: talk to, to be talked by another child/ren, participating in a discussion or proper conversation, and talking to self. The topic of conversation was also noted.

Comment: any necessary comment/s was recorded in this column.

The number of variables recorded simultaneously for a 10 second sample varied between 2 to 10. Outdoor activities were considerably rarer than indoor activities, but the same category systems were used to collect data, and the data was analysed in the same way.

After the data was collected, it was transcribed; then in the case of phase A data cards were punched. The data was stored in a University 1906S Computer. Phase B data was typed into the University Prime Computer straight away. For

the analysis of the whole data, phase A data was transfered from the 1906S into the Prime.

Categories, Origins and modifications.

The present study referred to those activities in which the child took active participation, which were not consummatorybehaviour or task assigned by the adults as 'play'. For different types of play, a combination of several categories appeared to be most appropriate. The classifications chosen had been used in a number of studies before, each of them reported a high level of agreement. These category schemes were slightly modified and adapted for the purpose of this study as follows:

Type of activity.

The classification used for the cognitive type of play was borrowed from the work of Smilansky (1968). This system suggests a hierarchical sequence from 'functional' to 'constructive' to 'dramatic' and finally to 'games with rules'. 'No play' and 'transition' were added to these categories to make the system more comprehensive.

No play:child is not engaged in any sort of play activity, listening to the stories or music (being done by the teacher or tape recorder),or drinking milk.

Transition:child is engaged in routine behaviour which is terminating one activity or preparing for another one. For example, putting apron on or taking it off, taking a painting to the teacher, washing her/his hands after painting.

Functional play: simple repetitive muscle movements with or without objects. For example, touching things, jumping up and down without indication of complexity, fumbling, fiddling.

Constructive play: manipulation of objects to construct or 'create' something. Examples are: jigsaw puzzles, building or making something with blocks, or any activity in which

the child tries to come up with a new idea.

Dramatic/Fantasy play: play during which evidence of make believe by use of verbalisations, actions or objects has been shown by the child.

Games with rules: an activity with pre-arranged rules which the child must adjustto while taking part, such as: hopscotch.

Level of complexity.

This measurement of behaviour was taken from Kalverboer (1977) who regarded play as a potentially rich source of information in both clinical and developmental psychology. He defined 4 levels (1-4) for the complexity of children's play behaviour. This classification originally suggested a level 2 and also a level 2E. For the purpose of this study the definitions of level 2 and level 2E were combined and were used as level 2.

Play level 1: play activities during which there is no indication of constructive or symbolic character and not specific to the material handled (same as functional play defined earlier).

Play level 2: Play activities which are directly related to the obvious function of the material, and which are determined by similarities in form and size or the qualities of the material or by inspection or exploration of the possibilities of the material, e.g. piling up blocks without really building, or comparing the size of the block, inspecting wheels and doors of the car, etc.

Play level 3: simple fantasy play, and any fantasy or constructive play, in which the child uses different play materials, in an obvious or non-inventive way, for example, joining a car and trailer, moving around and making 'car' sounds, dressing up and undressing a doll (if there is a combination of toys every single one should be used as if they were isolated activities).

Play level 4: different sorts of play things are combined in complicated constructive or fantasy play, for instance, cooking dinner, setting table and serving.

Social participation.

For the social form of play the classification was taken from Parten (1932). She devised a classification through which the preschool child moves from 'unoccupied' to 'onlooker' to 'solitary' to 'parallel' to 'associative' and to 'cooperative' activity. This classification was slightly modified in that watching other children at play regardless of any verbal participation or supervision was considered as 'onlooker'.

Unoccupied behaviour: child is not playing or interested in any focus in the environment. S/he may play with her/his body, following the teacher aimlessly or glance around the room, or stare at a point.

Onlooker: child is watching what others do. S/he may ask questions or make suggestions, but doesn't join in. S/he is definitely absorbed by a particular group of children, or event.

Solitary play:or playing alone. There is no play partner in this play. Child plays on his/her own with or without handling playthings. Child plays quite independently with no effort to get close to other children or make reference to their actions.

Parallel play: in this type of play a child is in proximity to others and uses the same playthings but plays beside rather than playing together. Little or no interaction takes place.

Associative play: child plays with others, taking ideas from others, perhaps borrowing and lending toys or commenting on another's action, but following her/his own inclinations.

Cooperative play: or organised play is the type of play in which the child cooperates with others to follow one idea or suggestion such as: making a road, a garage, building a house or introducing a theme. Each child plays his/her own part, simultaneously they all follow a certain plan.

chapter 2: Method

Dramatic play.

It was of particular interest to look at the developmental significance, and the developmental changes in dramatic play. For these, a category scheme was taken from Watson and Fischer (1980), who predicted that children in their social role taking would move through eight stages from the age of 1.5 to 7.5 years. The stages outlined were self agent (emerges during sensory motor period), active other agent (emerges during single representational period), active substitute agent, behavioural role and social role. Another three stages in this classification system predicted further development of fantasy play during an age range beyond the scope of this study, and were thus omitted. No further modifications were made.

self agent child pretends to carry out one or more behaviours not necessarily fitting a role, e.g. child pretends to drink from an empty cup.

Active other agent: child causes a pretend agent, e.g. doll to perform one or more behaviours not necessarily fitting a

role or social role, for example, child pretends a doll is talking, walking, eating, as if it were actually carrying out the actions itself.

Active substitute agent: child causes an object to substitute for an agent and performs one or more behaviours not necessarily a role. For instance, child pretends that block is walking, talking, or going to sleep, as if it were a person or a doll itself.

Behavioural role: a child performs several behaviours fitting a role. Examples are: child pretends to set the table and feed the doll or another child or to use thermometer and stethoscope on another child or doll; child pretends to be a dog, a cat or monster by, for example, running on all fours and making noises.

Social role: child behaves to a certain social role (father, mother, etc) which relates to a second child who behaves according to a complementary social role (baby), for example, child pretends that a baby doll is hungry and a

mummy doll feeding her and gives her drink or takes it to bed. Child pretends to be a dog which belongs to and is fed by another child who pretends to be housekeeper.

Verbalisation.

From the verbal communication of children, different forms were distinguished: monologue, dialogue, and soliloquy. A classification system was devised to meet the needs of the present study.

Monologue: recorded as either talking at, or to be talked by another child/ren.

Dialogue: which is considered as a proper kind of conversation in which at least two parties are involved.

Soliloquy: or talking to self, refers to the play situation in which the child talks but apparently no partner/s can be seen.

Difficulties in observation.

In observational studies a number of factors are considered to be possible sources of difficulties. One is the number of children observed simultaneously. The present study concerned itself with observing only one child at any one time. When recording data related to play partner/s, up to three partners were observed, but more than this was considered too confusing.

The greater the number of categories observed the greater the problems of category discrimination. The problems in this respect were reduced by spending a considerable period of time in pilot study. The actual study started after all the category schemes were well practiced and very familiar to the observer.

The observer may be influenced by her expectations relating to the hypotheses involved. However, this observer was concerned merely to gather facts and score what was going on rather than what she felt ought to be going on. It was felt that this consciously open-minded approach meant that conclusions were not pre-judged.

Test of reliability.

As dicussed earlier in this chapter, observational data can be assessed in several ways: split halves, interobserver reliability, and intraobserver consistency. When considering the first method, I decided that the method was inappropriate. This method compounds observer unreliability with the normal day-to-day variation obtained when observing children's play behaviour.

However, the method of interobserver agreement was adopted and used at regular intervals. An experienced observer, well familiar with the classification of children's play and those system used in this study was asked to score children's play behaviour with the investigator herself. Each observer held a stop watch and also, the investigator used a dot timer which was set at 10 seconds. The dot timer aided synchronization between the two observers. The system used was that observers simultaneously made four successive 20 minute samples, on different children. This amounted to 80 minutes per reliability session and a total of 240 minutes per observer.

In most cases a high percentage agreement was obtained. The results are shown in Table 2/a.

Chapter 2: Method

Table 2/a represents percentage agreement obtained on different aspects of play, using the formula: A/(A+D/2).

(Table 2/a) INTER OBSERVER RELIABILITY (%)

variables.	Re 1	Re 2	Re 3	Mean
Activity	87.5	81.2	86.0	84.9
Level	45.0	54.5	96.0	65.2
Social	85.0	98.3	91.9	91.7
Dramatic	95.7	99.0	93.8	96.2
Verbal	87.9	81.2	98.3	89.1

As can be seen from the table, the level of agreement shows variations across variables. However, level of agreement is significantly high in most cases apart from those related to the level of complexity.

Intraobserver consistency was also considered to be of importance. It was clear that the observer's method of sampling could unconsciously be altered, particularly with the long time scale. To check whether this was happening several episodes of children's play were videotaped (using 4 non-subject children). The video was examined three times over the period of the data collection (that is, every 6 months). At this rate the danger of recalling previous scans was minimised. Table 3 shows the results. Reliability in this study, for both interobserver reliability and intraobserver consistency were calculated, using the formula $A/(A+\bar{D}/2)$.

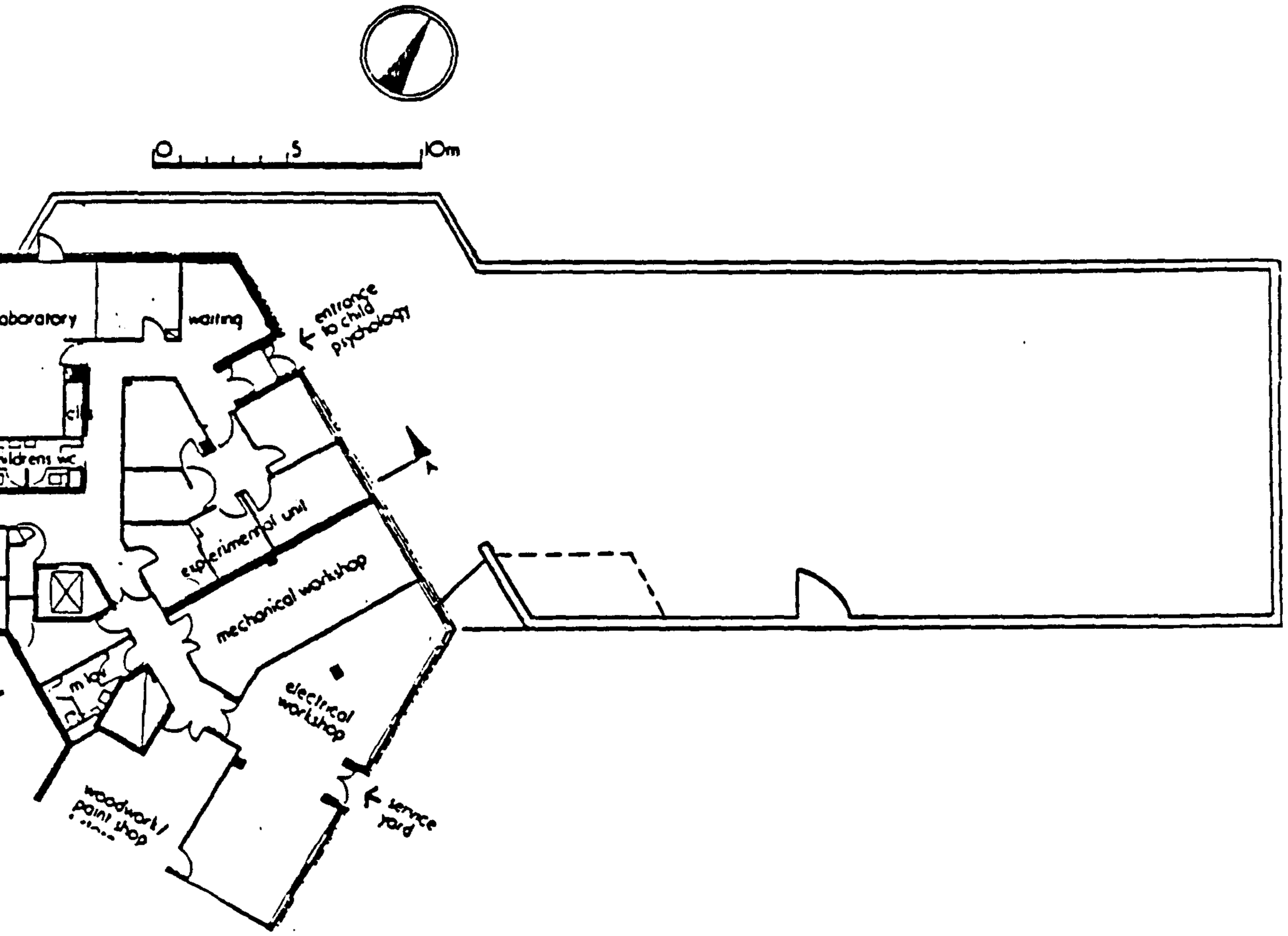
Table 3 represents percentage of consistency of the observer's sampling of play categories.

(Table 3).INTRAOBSERVER CONSISTENCY (%)

Variables.	Re 1	Re 2	Re 3	Mean
Activity	95.7	96.0	94.2	95.3
Level	85.2	98.3	95.7	93.1
Social	93.8	98.3	99.2	97.1
Dramatic	97.4	91.9	96.2	95.2
Verbal	89.1	98.3	99.2	95.5

As seen from the table there are variations across variables. However, the investigator remained significantly consistent throughout the sampling period.

The following diagram shows the plan of the **MUSHROOM LANE NURSERY SCHOOL.**



Playground Approximately 2,200 square feet. This plan of the playground is not accurately scaled.

CHAPTER THREE

Case histories and play profiles.

The aim of this chapter is to focus on a 'play profile' of each of the subjects. The target children girls are called: gI, gII, gIII, gIV, and the boys are called: bI, bII, bIII, bIV. The information gathered has been split into two parts: i) qualitative information, and ii) quantitative analysis based on observational data.

i) The qualitative information consists of: background data for each individual child (family background, birth order, number of siblings and sex). Complementary information consisting of: reports obtained from parents, nursery teacher and the investigators own notes in connection with the question 'how would you describe this child?' are shown in appendix D.

ii) The quantitative or observational data is based on the

chapter 3: play profile.

frequency of occurences of the spontaneous activities of each individual child. This reflects: the time spent on each type of activity which shows predominant activity or play preference; complexity level; social and verbal interaction.

The aim was to examine the relationship between the two types of information and to look at the overall pattern of play behaviour and its characteristics in each individual case with regard to the source of variation.

Earlier studies have mainly focussed on very general and global variables such as: individual and IQ differences. This approach has recently been shifted to more specific variables (like role-taking, sociometric status and creativity) and their relationship with the frequencies with which children engage in different forms of play.

There is evidence that the play of boys and girls differs along the line of activity levels and rough-and-tumble play (DiPietro, 1979); there is evidence that boys and girls differ in the amount and the complexity of cognitive (Rubin, 1977) and social (Smith, 1977) forms of play. Stage theorists have also concerned themselves with the predominant activities, but the theories in this respect

tend to be developmental (Piaget, Vygotsky) and yield little insight into the sources of individual variation.

One of the unexplored areas in the play of individual children is the study of play profiles which reflect the characteristic pattern of behaviours. This type of approach which considers the characteristics of the player, by looking at the 'quality' as well as the 'quantity' of the activities which occur during such period as 'free activity choice time' enables us to tap the importance of it in each individual case.

The two types of information obtained for each individual will be presented in turn.

Descriptive Material.

The information obtained about individual children consists of:

a) Bachground data for each individual which indicates the family background, the birth order, number of siblings and sex of the target children. These can be complemented with:
b) information made up of the teacher's assessment, mother's statement and the investigator's impressionistic and factual

chapter 3: play profile.

notes for each child.

The teacher's assessment and the mother's statement were obtained after the observations on a child were completed. The nursery teacher as well as the mothers of the target children were asked to describe these children briefly. Their statements are reproduced verbatim. The investigator's notes were written up mainly whenever she learnt about the target children through sources in addition to the nursery teacher and daily reports. They were also based on the investigator's impressions of the child throughout the period of the study, not just when the child was the target of observation (see the appendix).

chapter 3: play profile.

qI

Date of birth - 10.04.77

Date of starting nursery education - 14.01.81

Birth order/siblings: one older brother

Father's occupation - Carpenter

Mother's occupation - Housewife

Observation started - 21.1.81

qII

Date of birth - 07.01.77

Date of starting nursery education -17.09.80

Birth order/sibling: one older brother

Father's occupation - University lecturer

Mother's occupation - Housewife

Observation started - 21.01.1981

qIII

Date of birth - 07.01.78

Date of starting nursery education - 19.09.81

Birth order/siblings: one younger brother

Father's occupation - University lecturer

Mother's occupation - Housewife

Observation started - 21.01.82

qIV

Date of birth - 19.01.78

Date of starting nursery education - 28.09.81

Birth order/sibling: one younger sister

Father's occupation - Inspector (British Rail)

Mother's occupation - Housewife

Observation started - 21.01.82

bI

Date of birth - 02.05.77

Date of starting nursery education -01.14.81

Birth order/sibling: one younger sister

Father's occupation - Journalist

Mother's occupation - Journalist

Observation started - 21.01.81

bII

Date of birth - 04.02.77

Date of starting nursery education -11.09.80

Birth order/sibling: one younger sister

Father's occupation - University lecturer

Mother's occupation - Housewife

Observation started - 21.01.81

bIII

Date of birth - 30.07.78

Date of starting nursery education -20.09.81

Birth order/siblings: one older brother

Father's occupation - University lecturer

Mother's occupation - Housewife

Observation started - 21.1.82

bIV

Date of birth -17.03.78

Date of starting nursery education - 13.01.82

Birth order/siblings: only child

Father's occupation - Businessman

Mother's occupation - Business woman

Observation started - 21.01.82

chapter 3: play profile.

Quantitative analysis based on observational data.

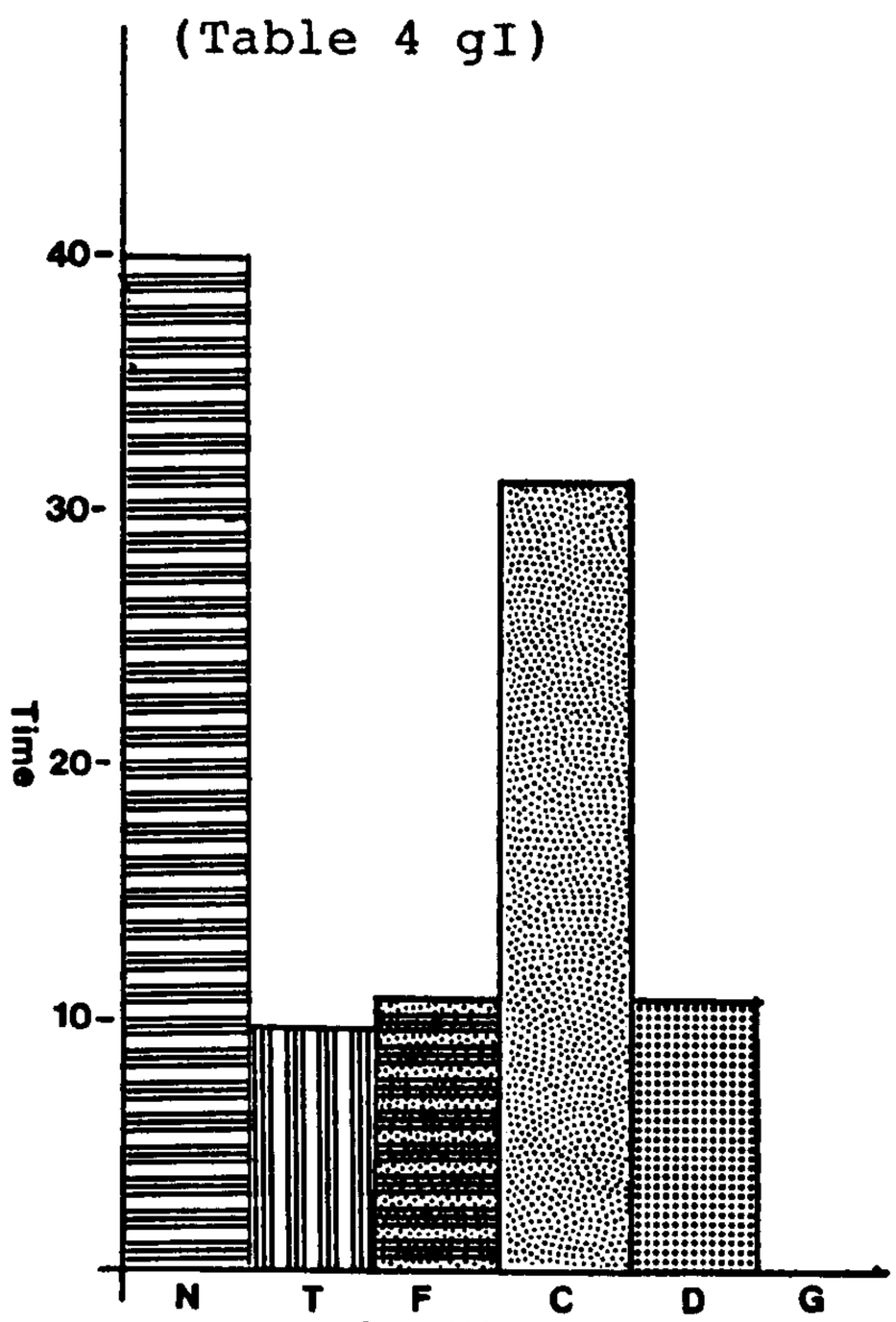
The same eight children were observed for 20 minutes per session, for 50 sessions, spread over a period of 9 months (see chapter 2). The context of their activities was recorded. An attempt has been made in this chapter to examine the content of the activities with regard to the time spent on cognitive and social forms of play, complexity level and the amount of verbalisation involved. The frequency of occurrence of each specific set of data reflects the pattern of behaviour of each individual subject. This form of information can be useful to consider whether or not children benefit from their free choice activity time. In other words in this chapter the following question is examined: If children were reasonably free to do whatever they wished to do, in a rich and stimulating environment such as a nursery school, while adult intervention is minimised, what would they choose to do?

The results are shown in the following tables (see Tables 4 to 11).

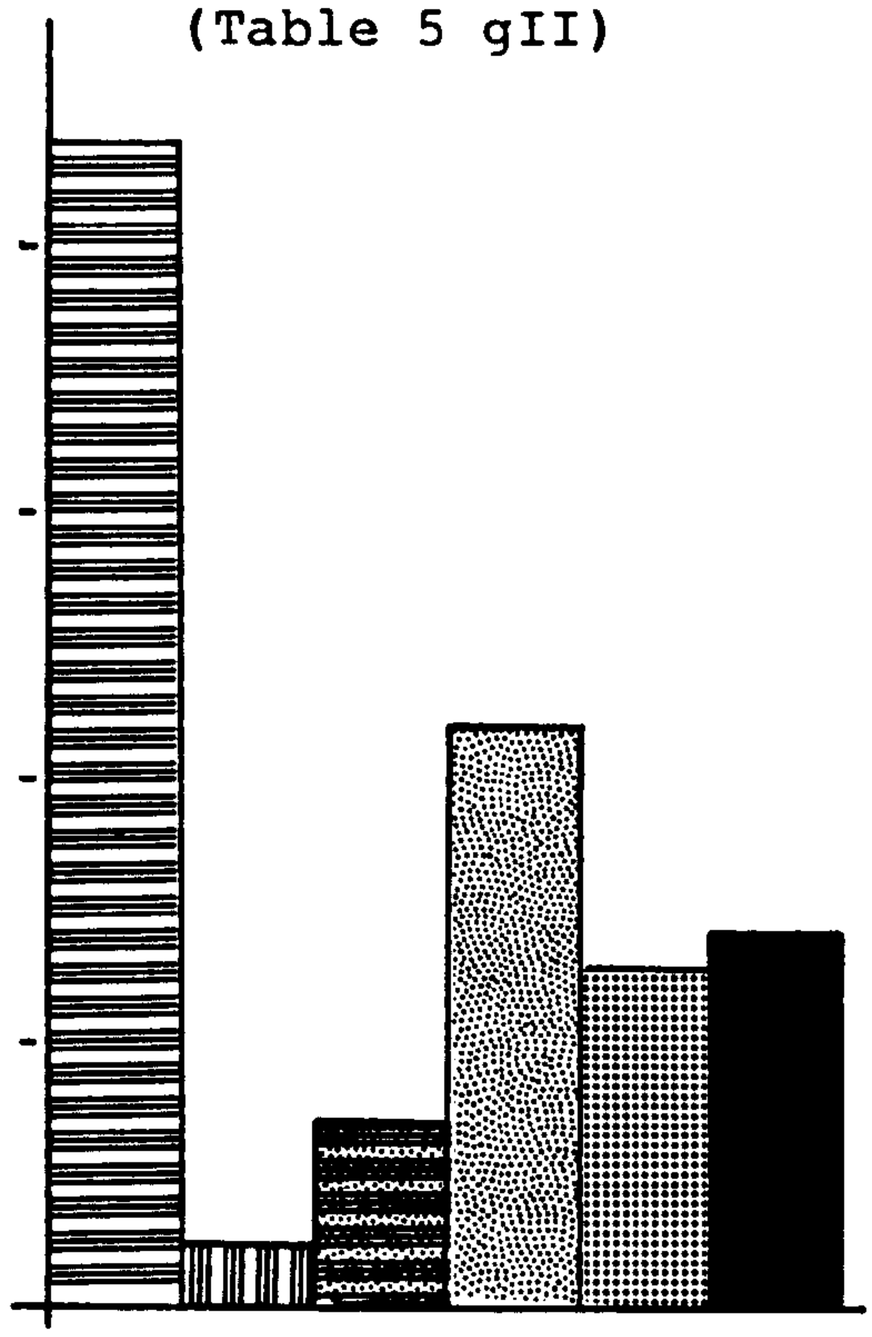
COGNITIVE FORM OF PLAY

Category used: No play(N), Transition(T), Functional(F), Constructive(C), Dramatic(D), Games(G)

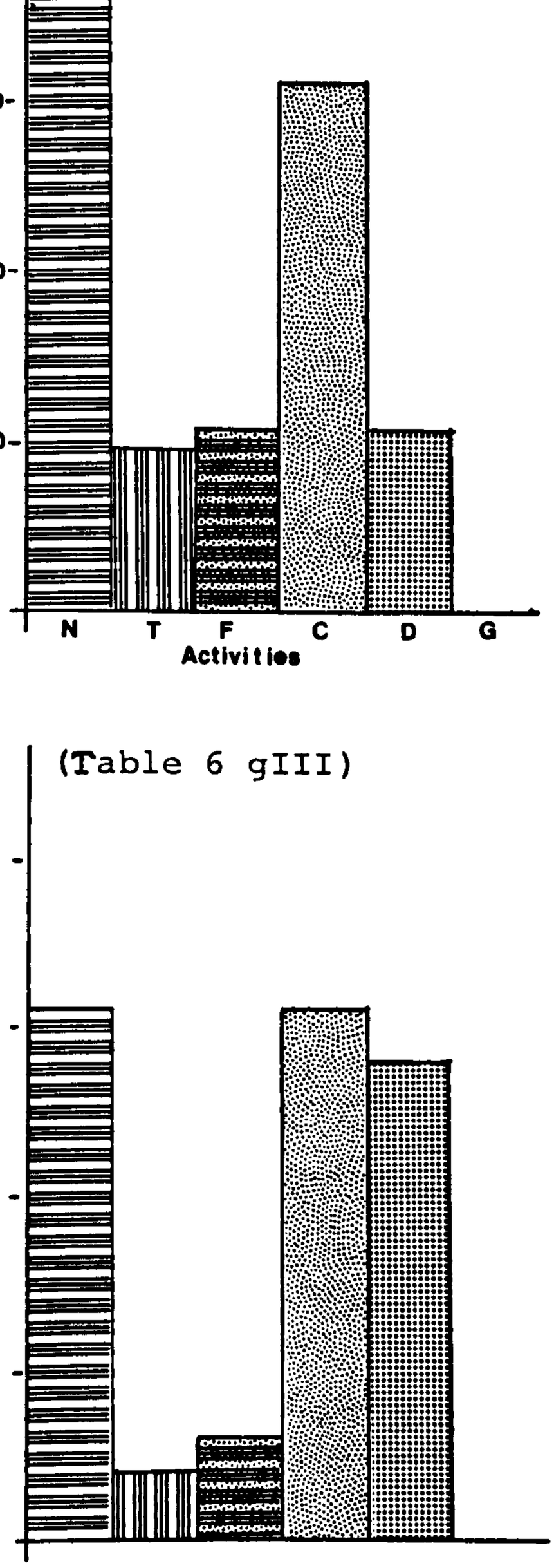
(Table 4 gI)



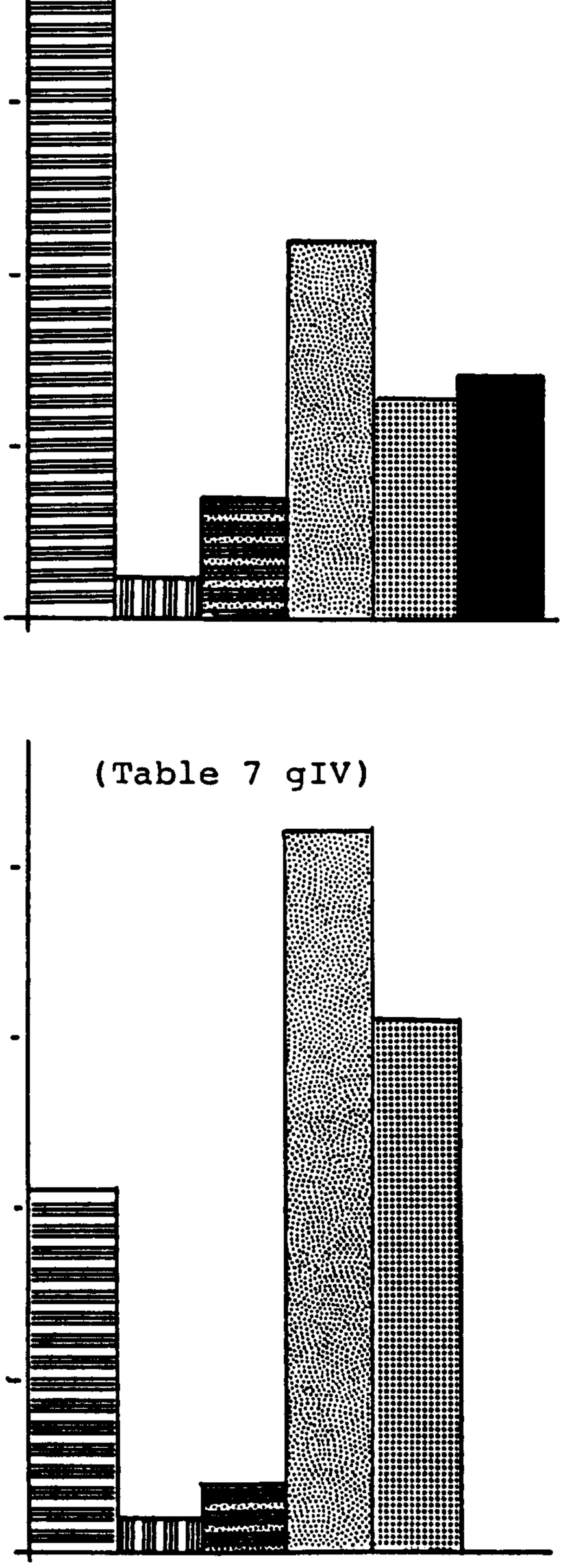
(Table 5 gII)



(Table 6 gIII)



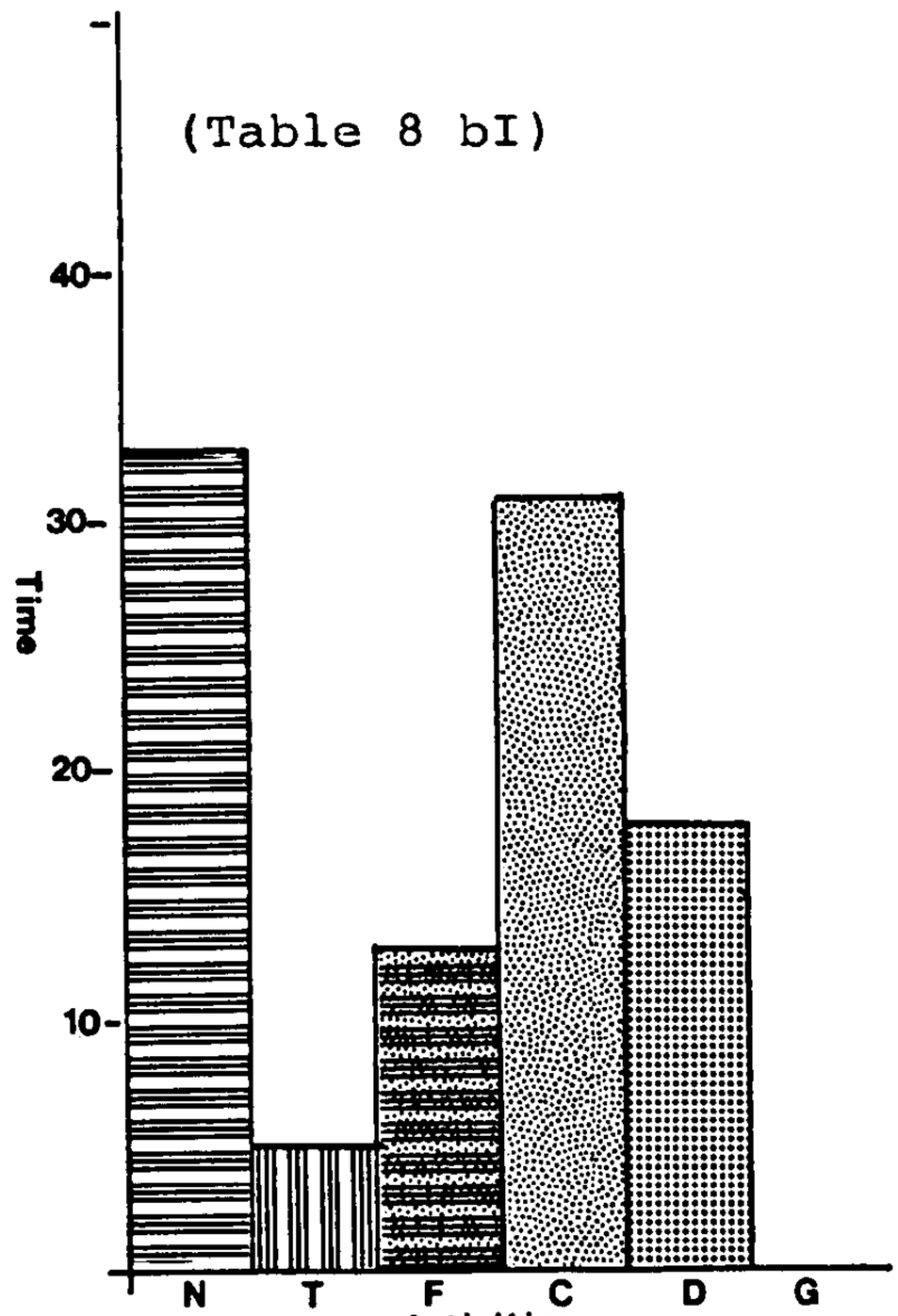
(Table 7 gIV)



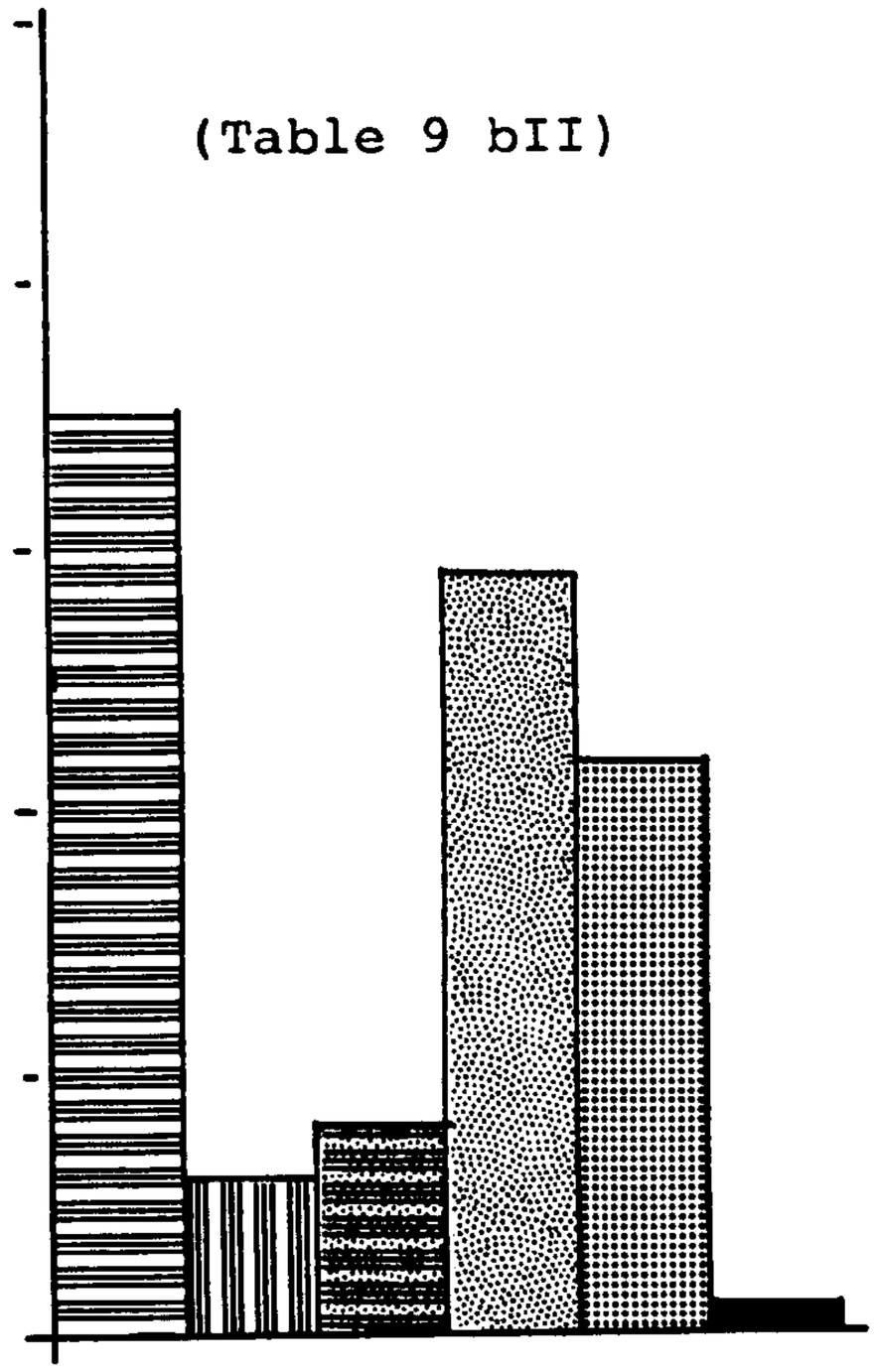
COGNITIVE FORM OF PLAY

Category used: No play(N), Transition(T), Functional(F), Constructive(C), Dramatic(D), Games(G)

(Table 8 bI)



(Table 9 bII)



(Table 10 bIII)

(Table 11 bIV)

Discussion.

coqnitive form of play.

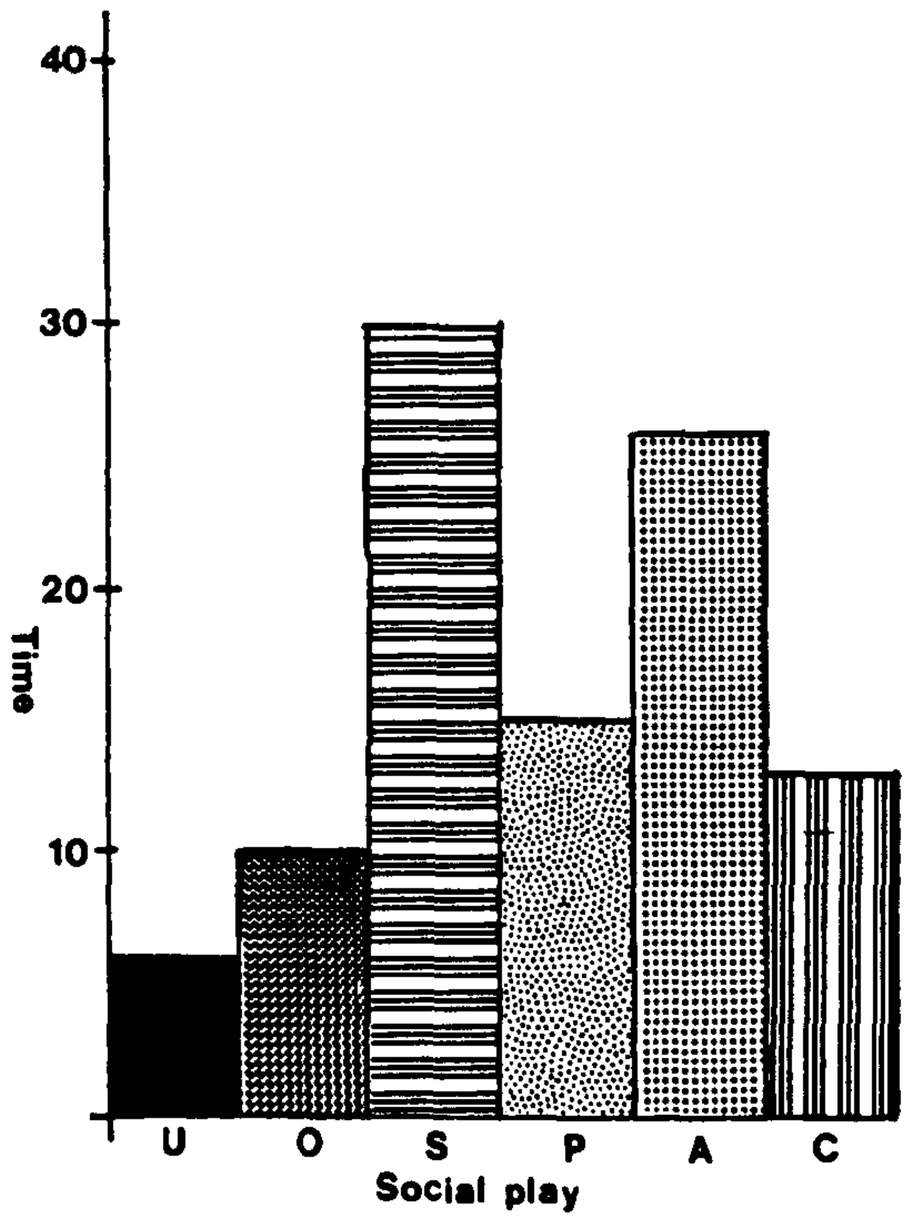
It can be seen from the tables (4 to 11) that the pattern of activity varies across the range of individuals. Time spent on non-play ranged between 14% and 51% of the observation time (summing up no play and transition) All the target children show some functional play; however, it is never the most frequent form of play. Constructive play is the predominant activity for 6 children, whereas dramatic play is the predominant activity for 2 children (see also the following charts). All children show both constructive and dramatic play. Game playing appears to be relatively infrequent and occurs when a child fails to occupy him/herself. It was in fact initiated by the nursery staff in order to occupy the child. There is a considerable overlap between boys and girls with regard to the time spent on each type of play.

The following 8 tables show the amount of time each individual target child spent in social form of play (see Tables 12 to 19).

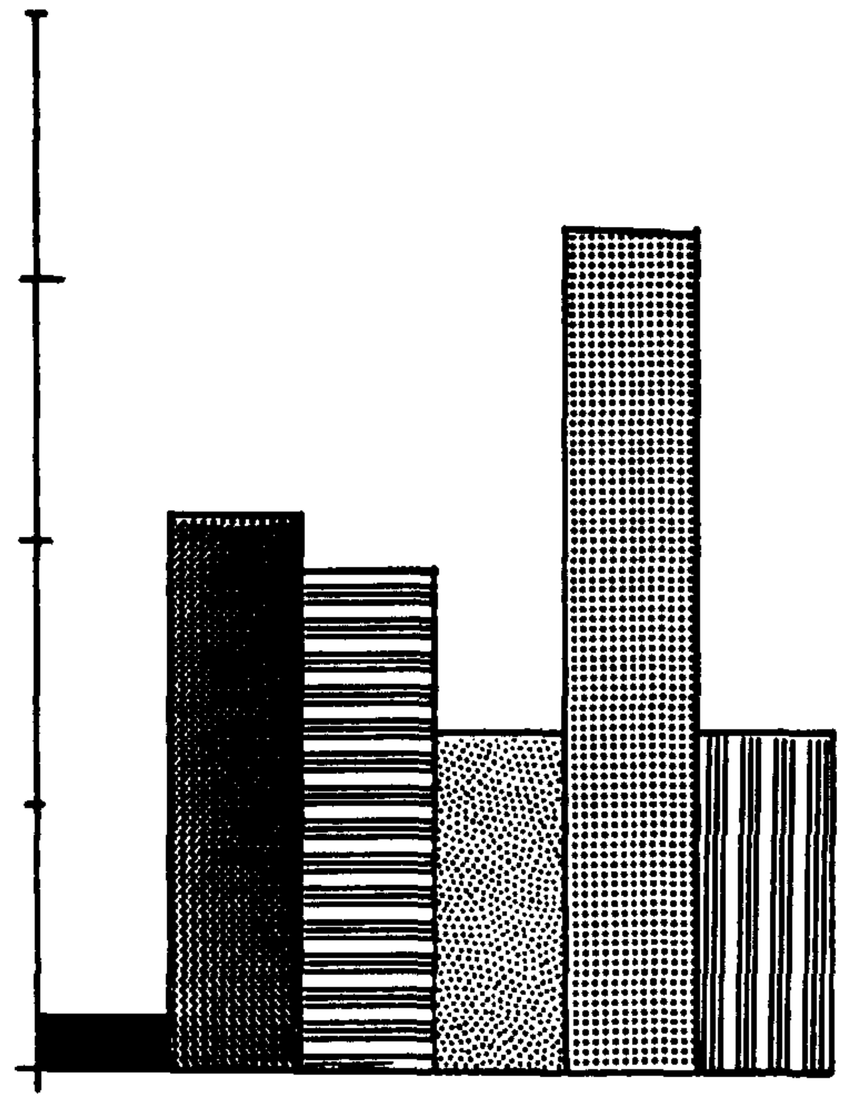
SOCIAL PLAY

The following Tables represent the time spent in social play during the course of observation.
Categories are: Unoccupied(U), Onlooker(O), Solitary(S), Parallel(P), Associative(A), Co-operative(C).

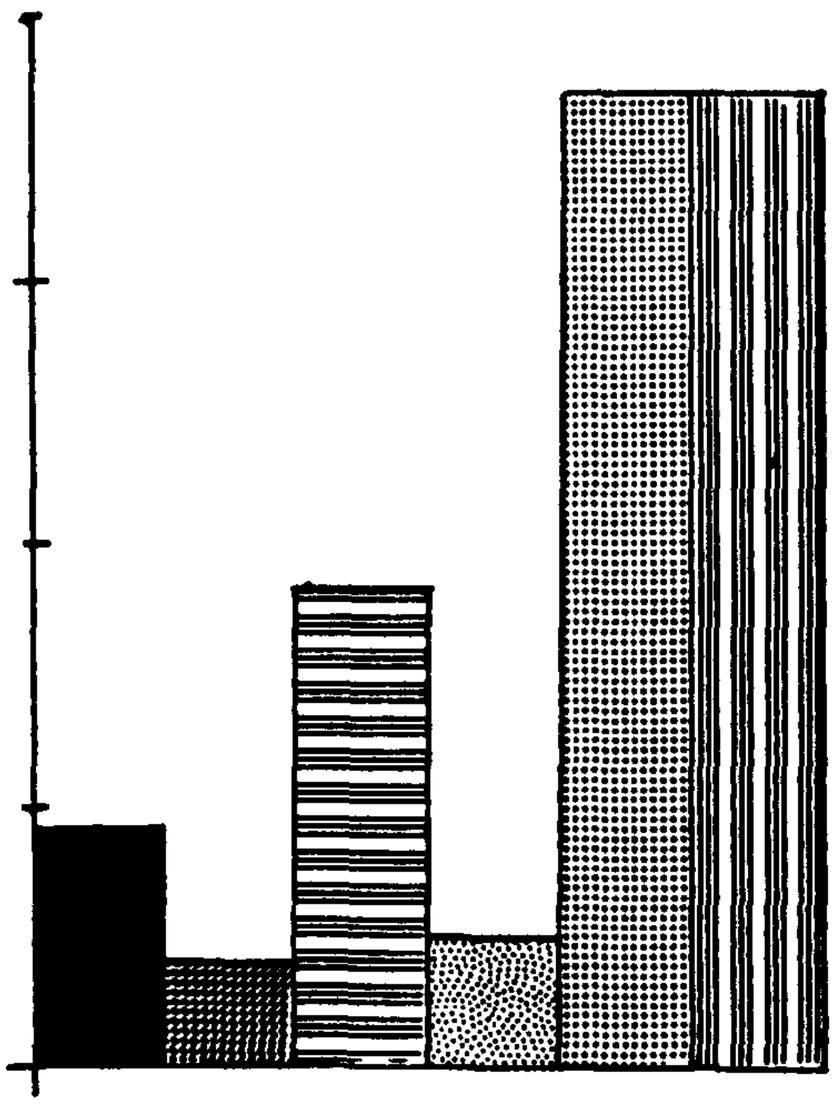
(Table 12 gI)



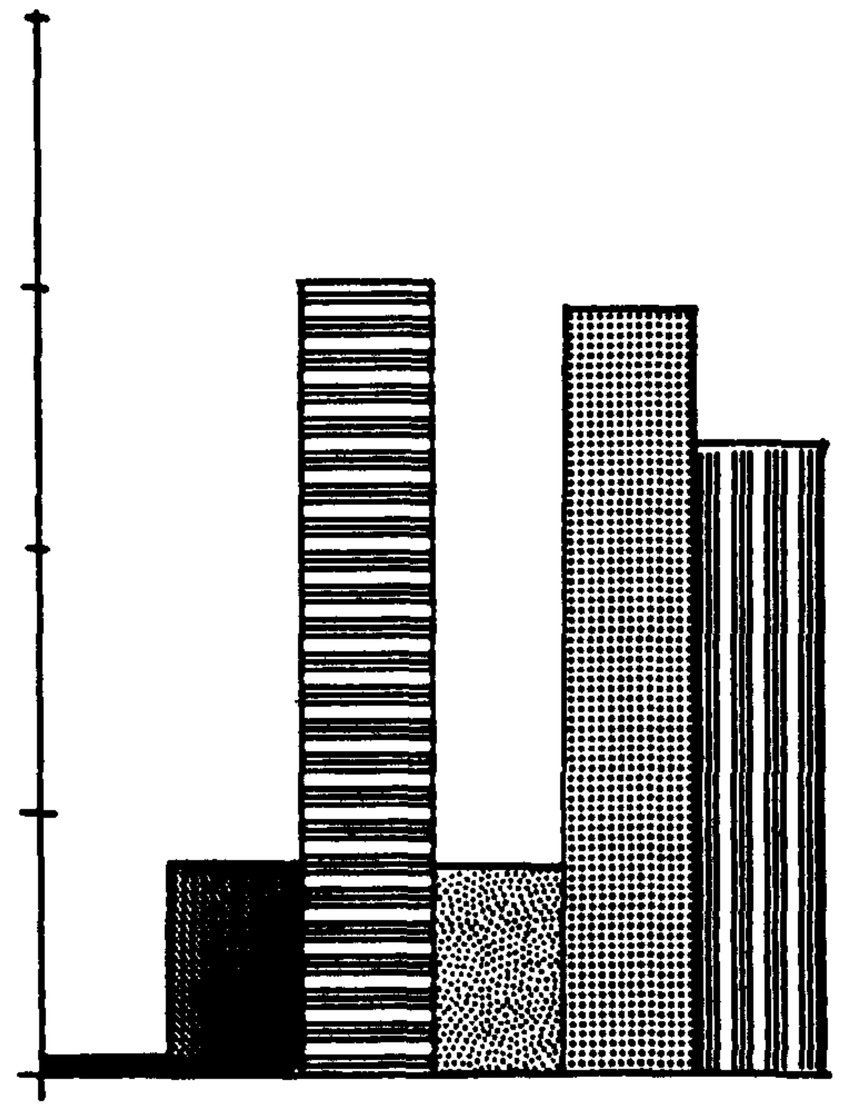
(Table 13 gII)



(Table 14 gIII)



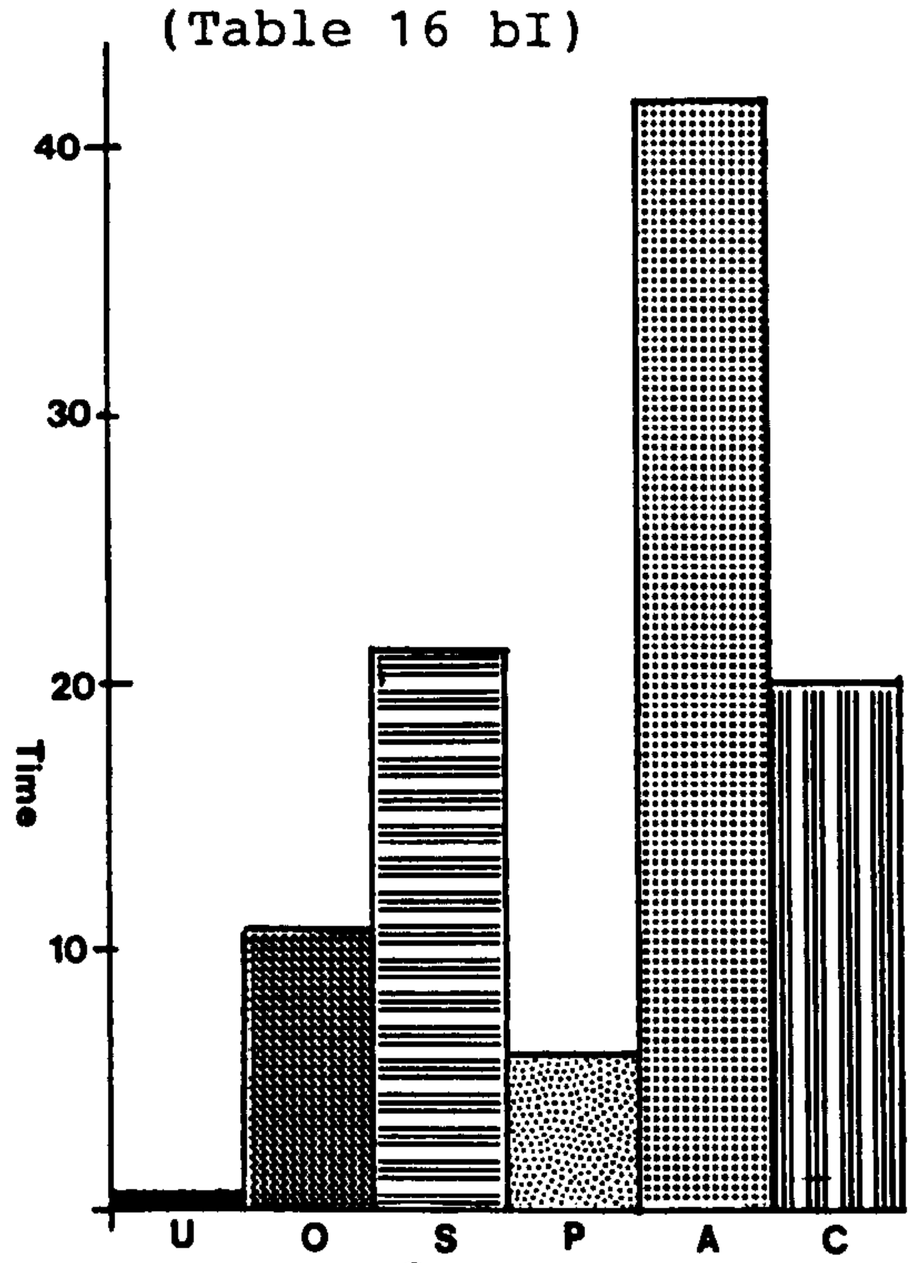
(Table 15 gIV)



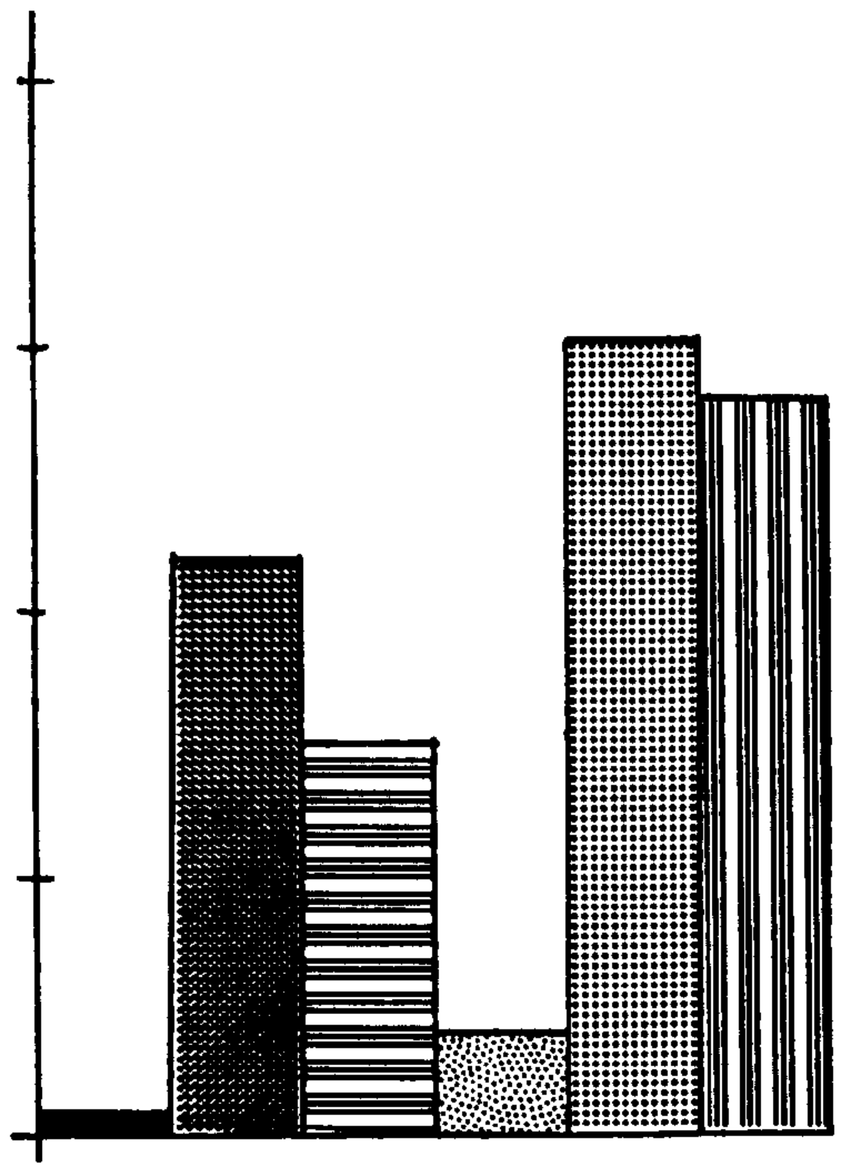
SOCIAL PLAY

Categories are: Unoccupied(U), Onlooker(O), Solitary(S), Parallel(P), Associative(A), Co-operative(C).

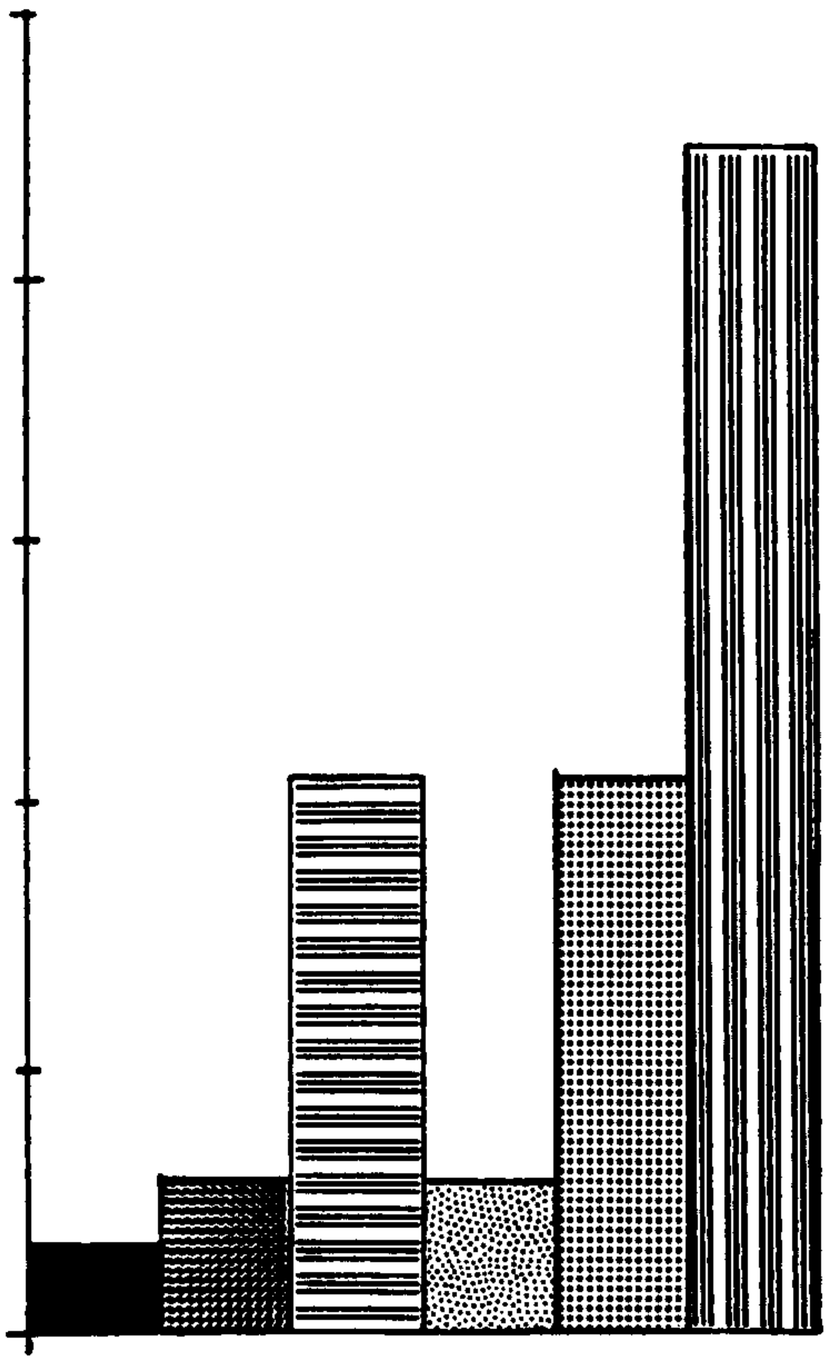
(Table 16 bI)



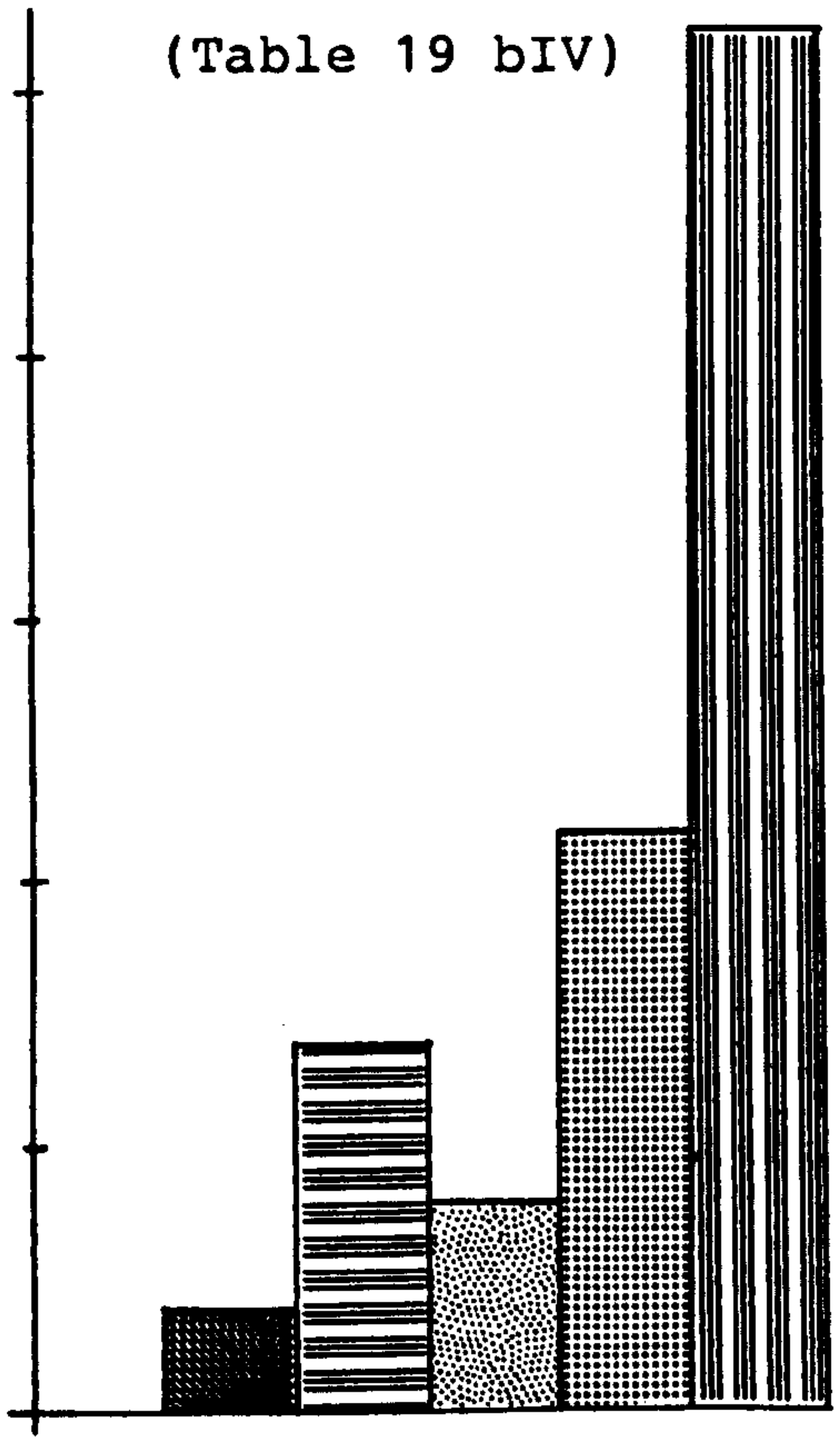
(Table 17 bII)



(Table 18 bIII)



(Table 19 bIV)



chapter 3: play profile.

Social play.

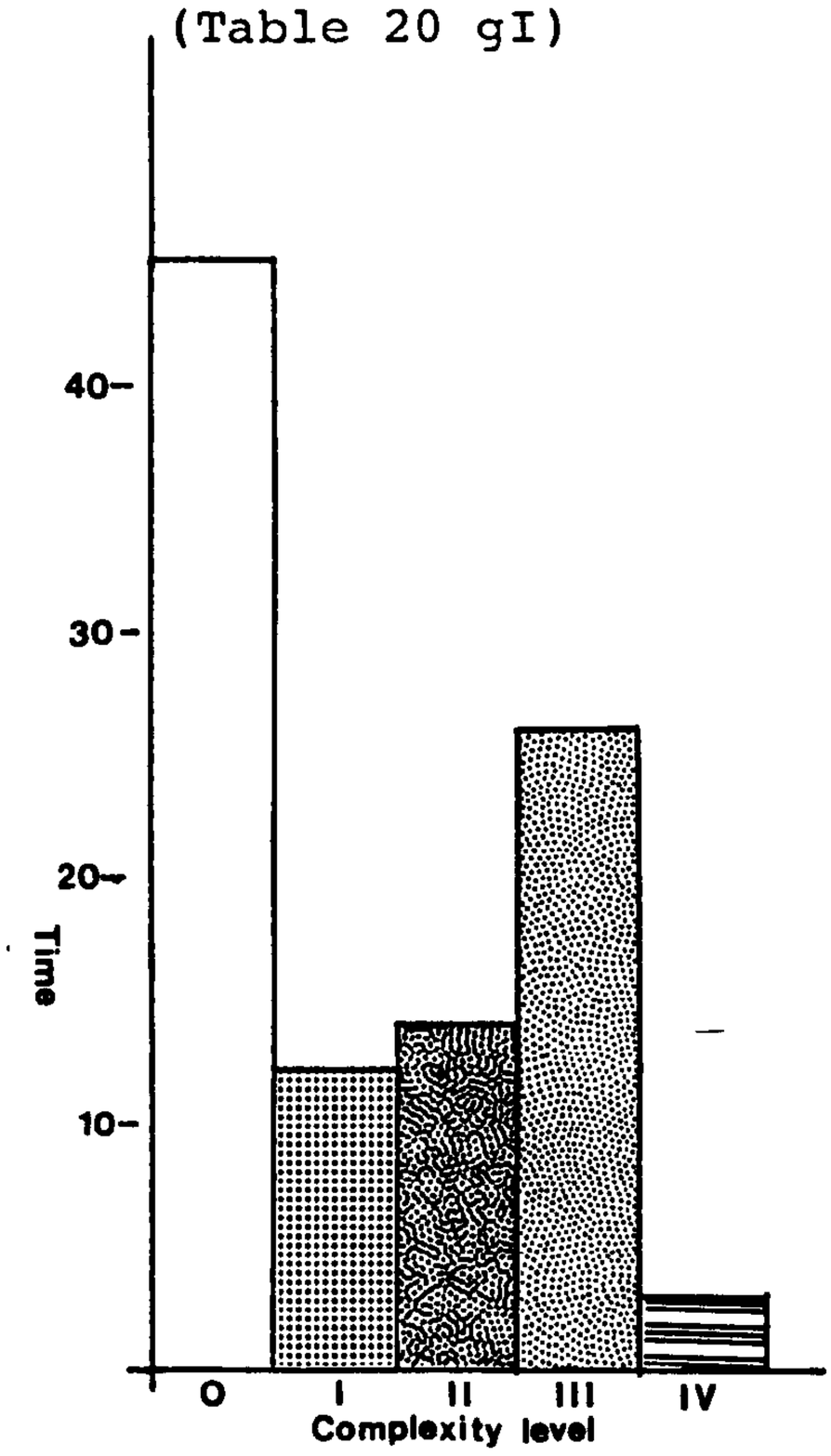
It can be seen from the Tables 11 to 19 that the social participation varies across individuals. 6 children spent time in being unoccupied, ranging from 1% to 6% of the observation time; solitary play still persists in all cases, ranging between 8% to 30% of the observation time. In 2 of the 8 subjects the solitary form of social play is the predominant one. Parallel play exists in all cases. Only 3 children predominantly spent time in the form of associative play, but it does exist in all cases. The cooperative form of social play exists in all cases but only in 2 cases appeared to be the predominant form of social play (see also the following charts).

The following 8 tables (20 to 27), show the complexity level of play behaviour of the target children during the course of observation.

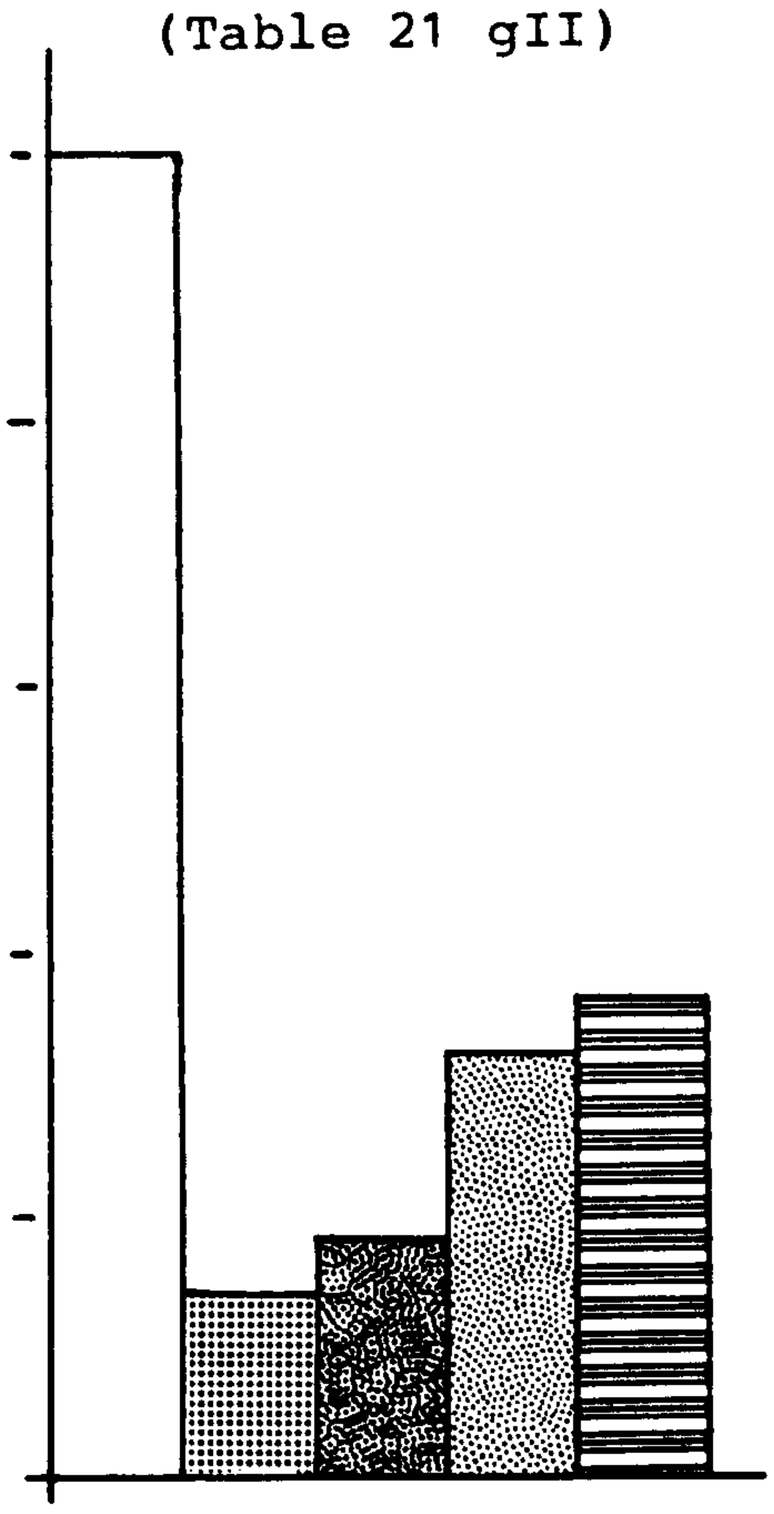
COMPLEXITY LEVEL

The following Tables represent the complexity level of play. Categories are: level 0, I, II, III, IV.

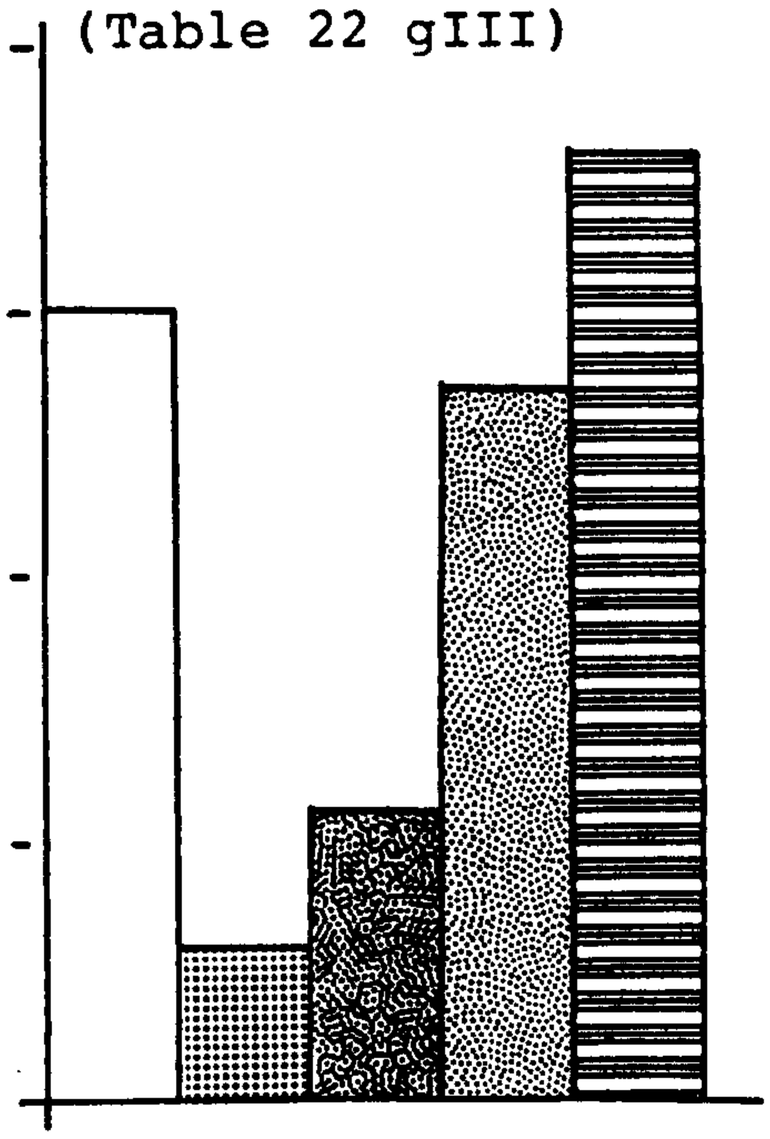
(Table 20 gI)



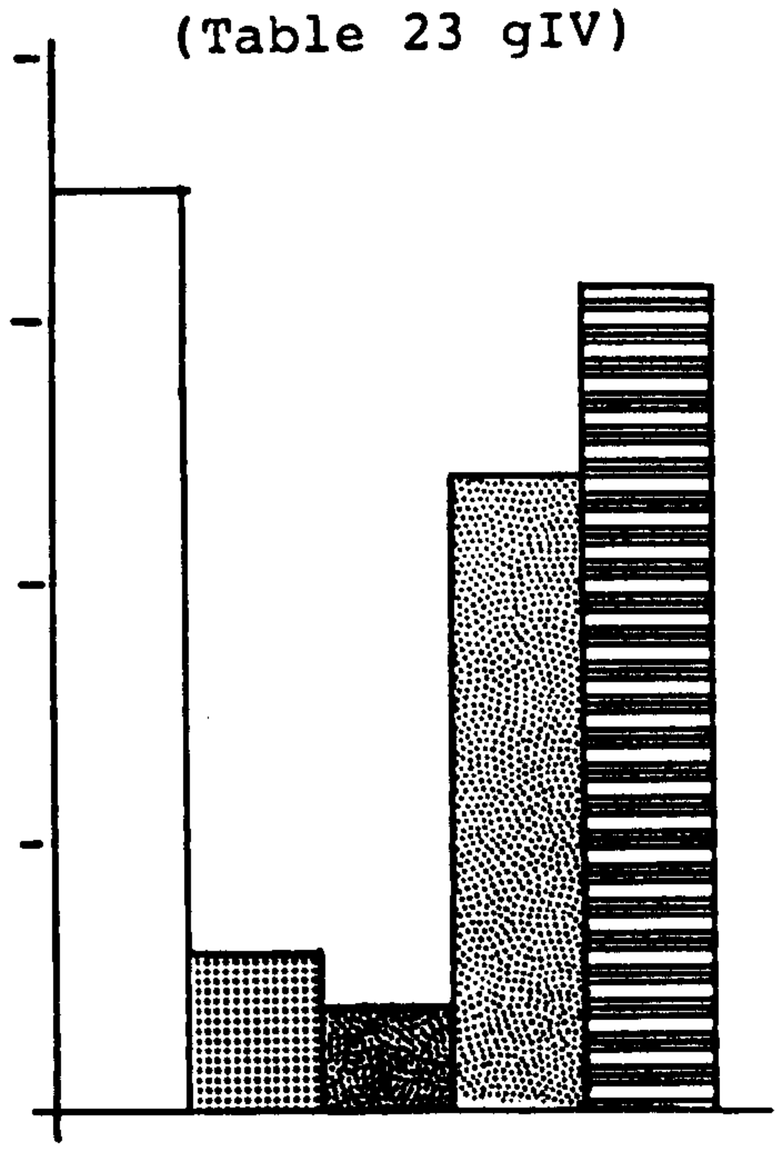
(Table 21 gII)



(Table 22 gIII)

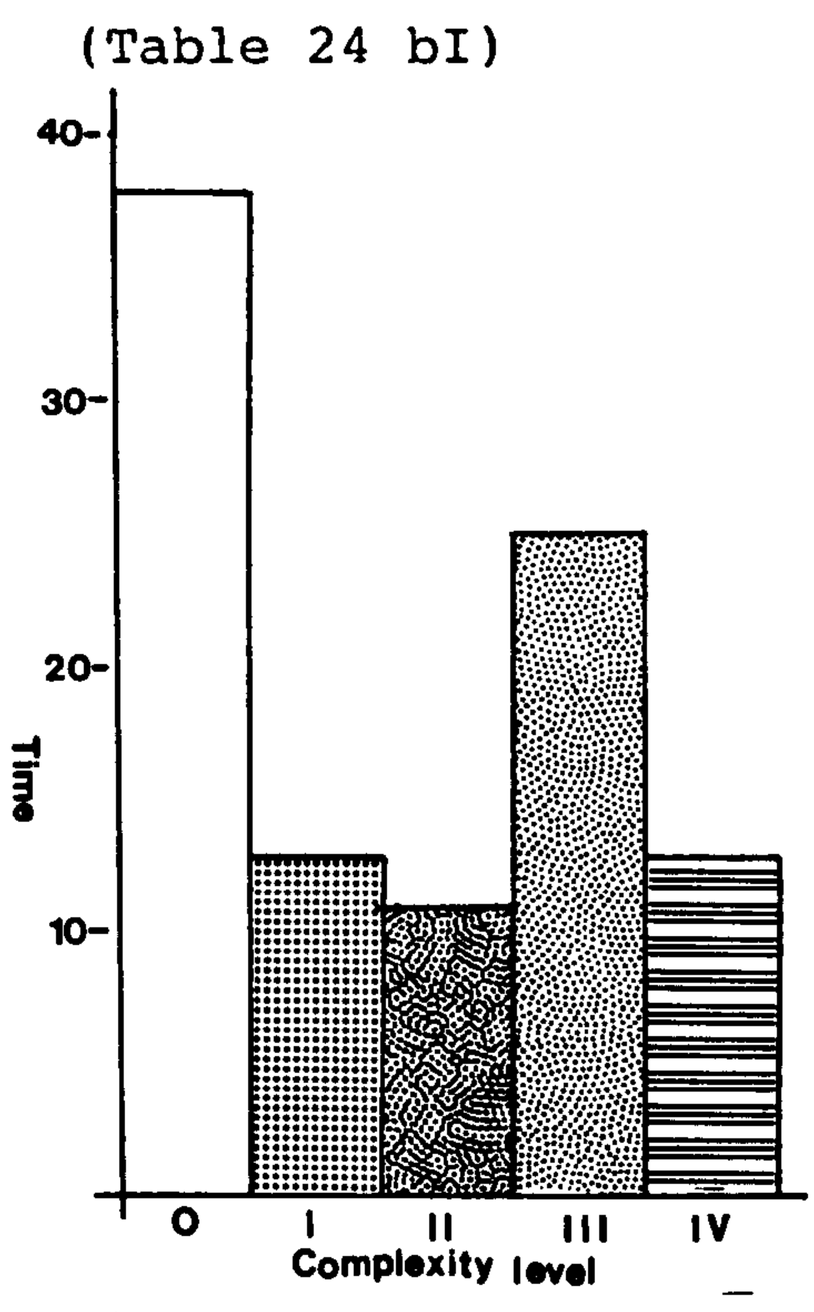


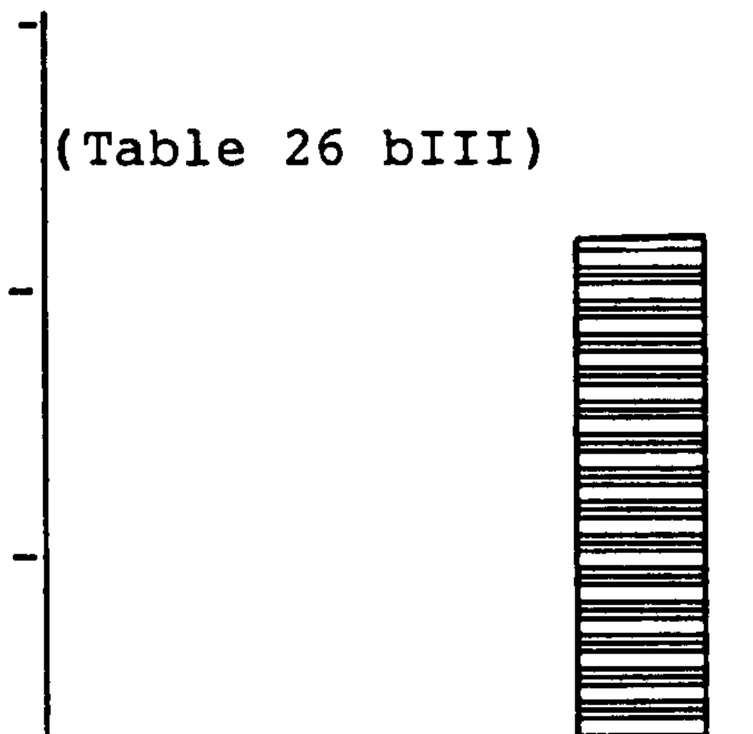
(Table 23 gIV)

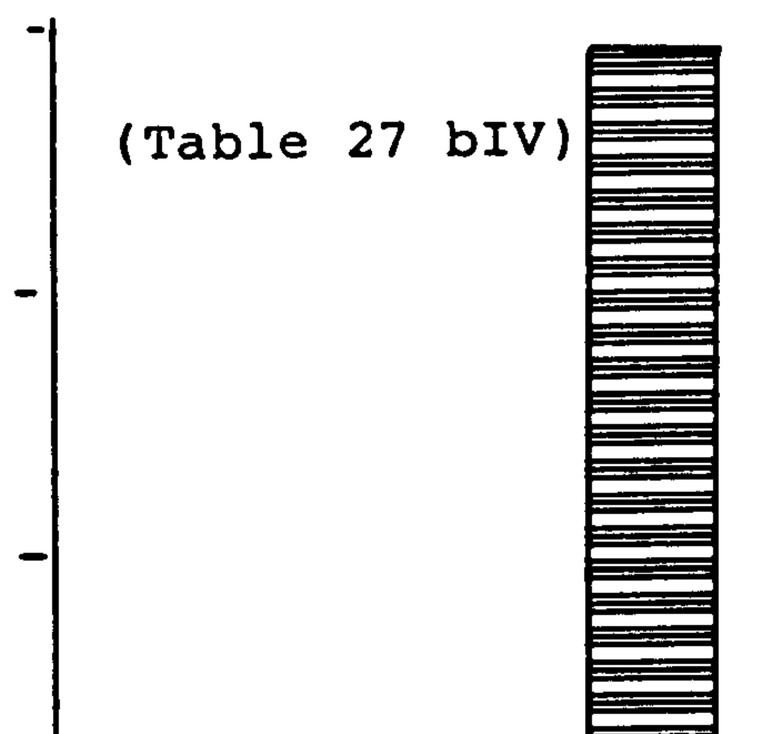


COMPLEXITY LEVEL

Categories are: level 0, I, II, III, IV.







chapter 3: play profile.

Complexity level.

From the Tables (20 to 27),strong individual differences can be seen in the overall pattern of play behaviour with regard to the level of complexity.

Level 0 (no play and transition) ranges between 14% and 51% and in 4 cases appears to be the predominant one.

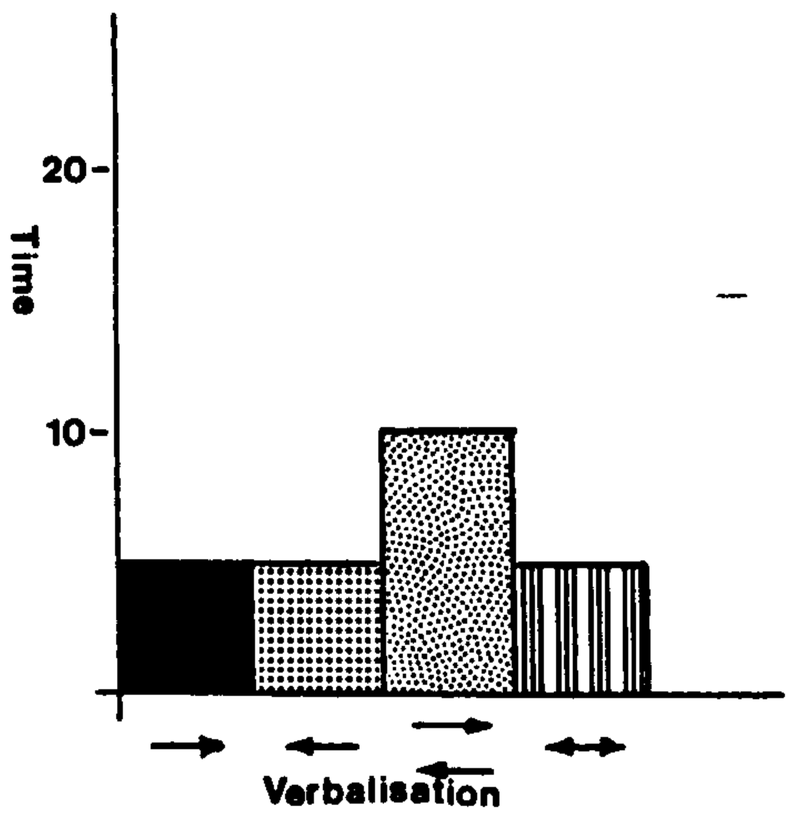
Level I (functional play) still persists in all cases. Level II has been played to some extent in all cases. Level III play was most frequent with only three children, whereas another five children preferred level IV.

The amount of verbalisation which occurred in each individual case, during the course of observation, can be seen from the 8 following tables (Tables 28 to 35)

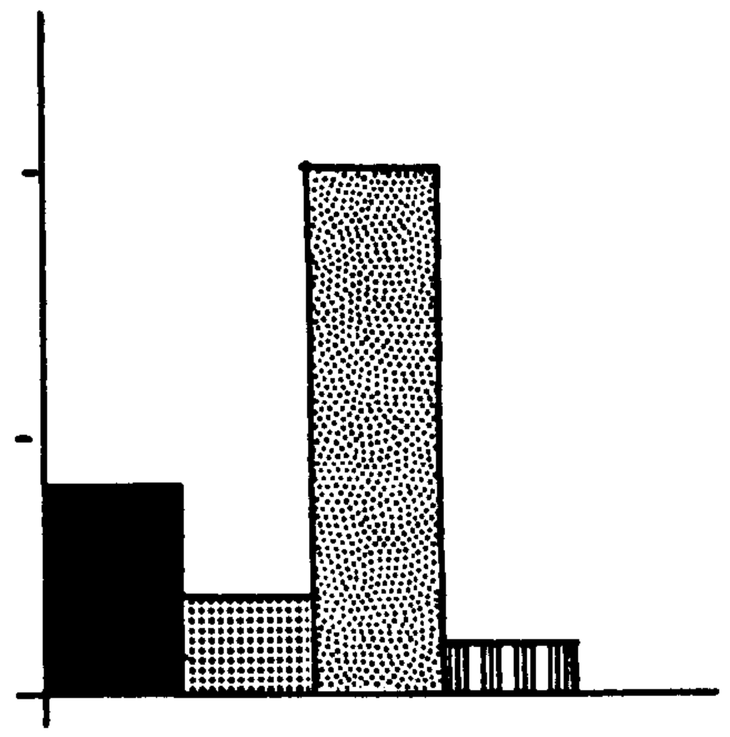
VERBALISATION

The following Tables represent the amount of verbalisation during the course of observation. Categories are: Monologue, consists of:talking at→, to be talked to by ←Dialogue⇄, and soliloquy↔.

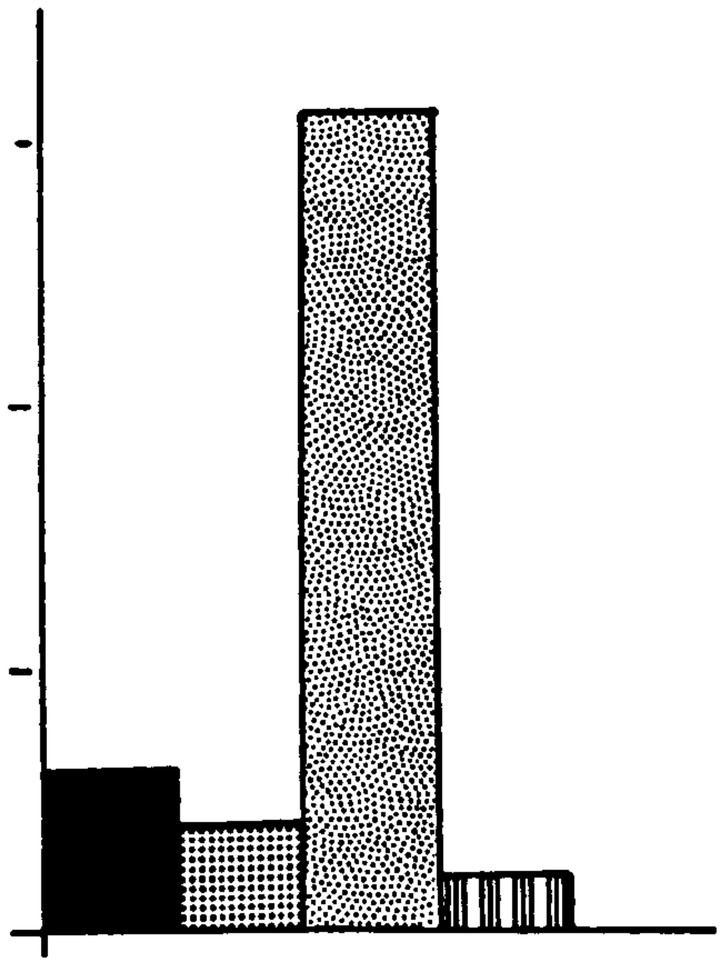
(Table 28 gI)



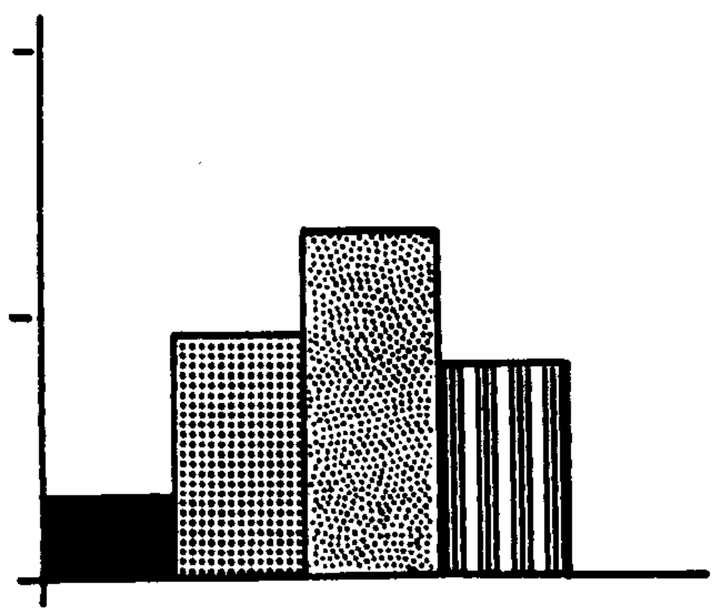
(Table 29 gII)



(Table 30 gIII)



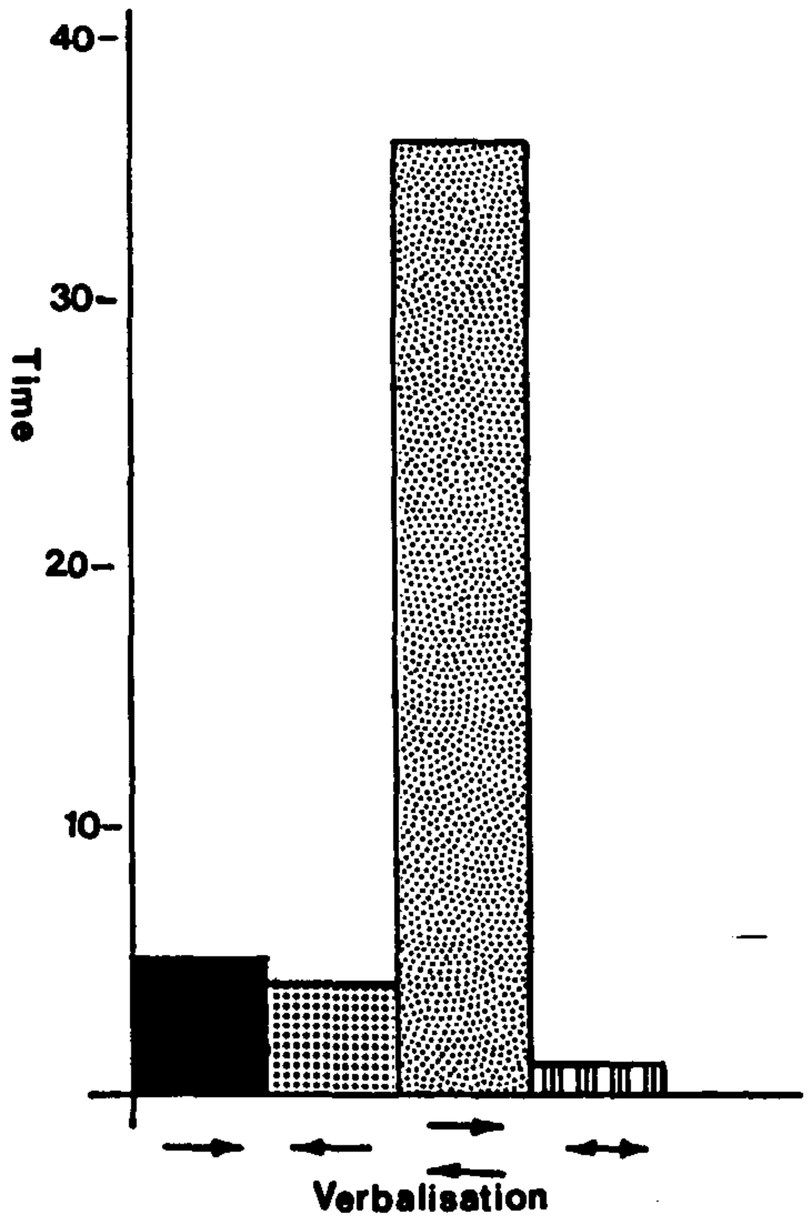
(Table 31 gIV)



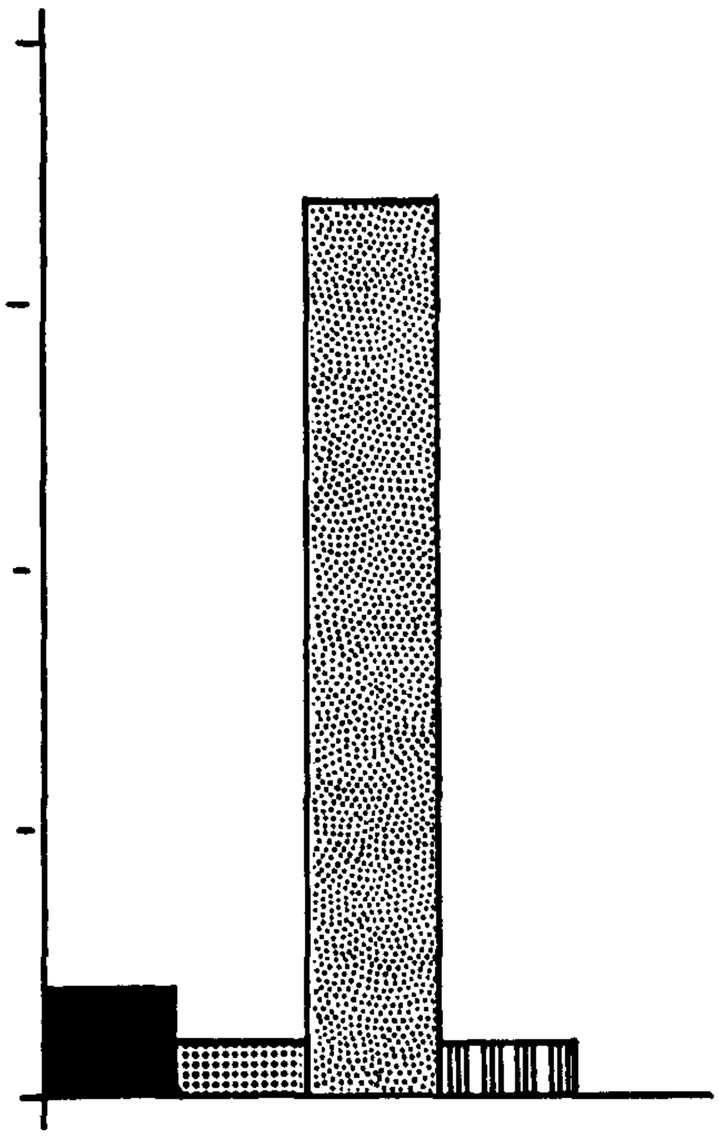
VERBALISATION

Categories are: Monologue, consists of:talking at →, to be talked to by ←, Dialogue ⇄, and soliloquy ↔.

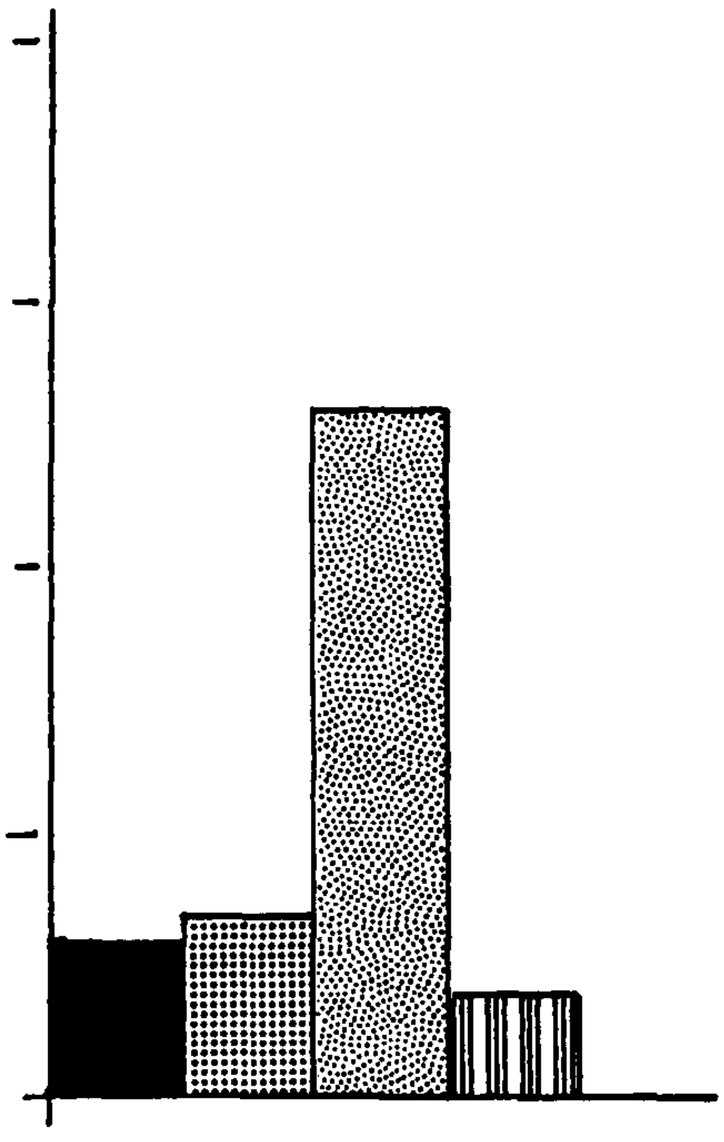
(Table 32 bI)



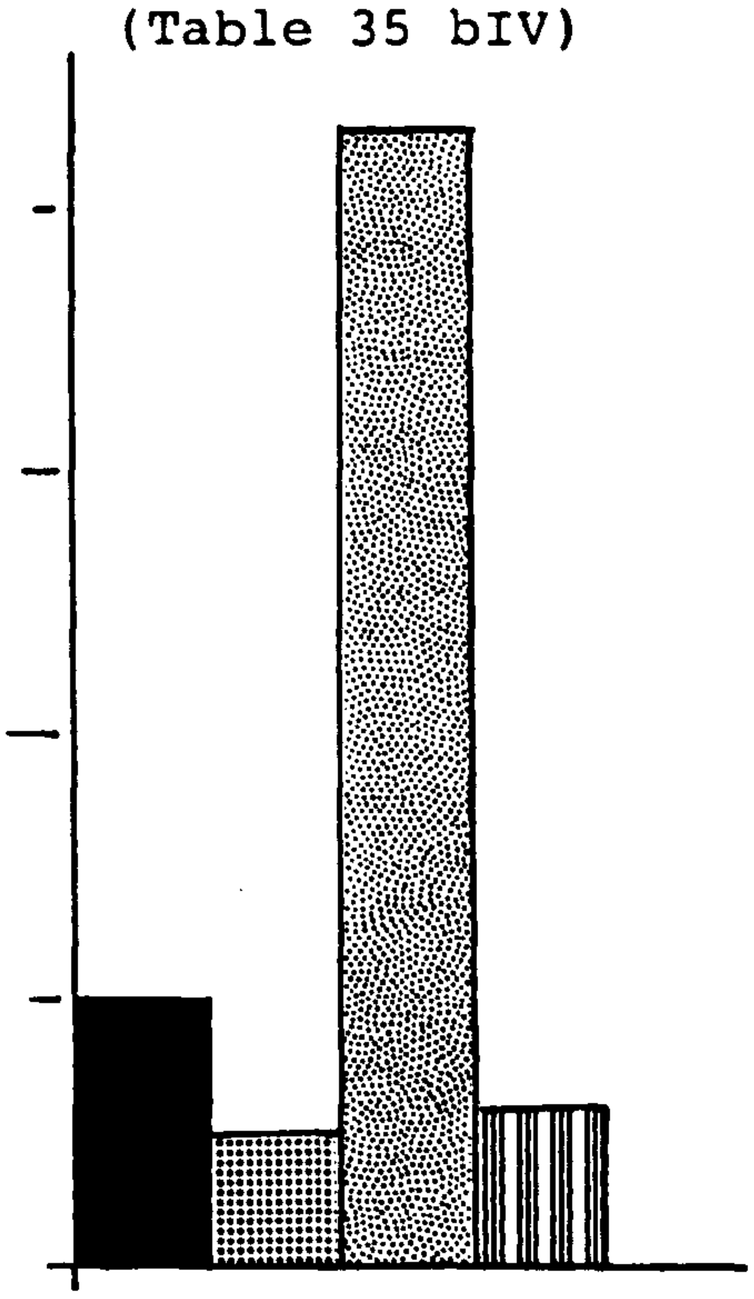
(Table 33 bII)



(Table 34 bIII)



(Table 35 bIV)



Verbalisation.

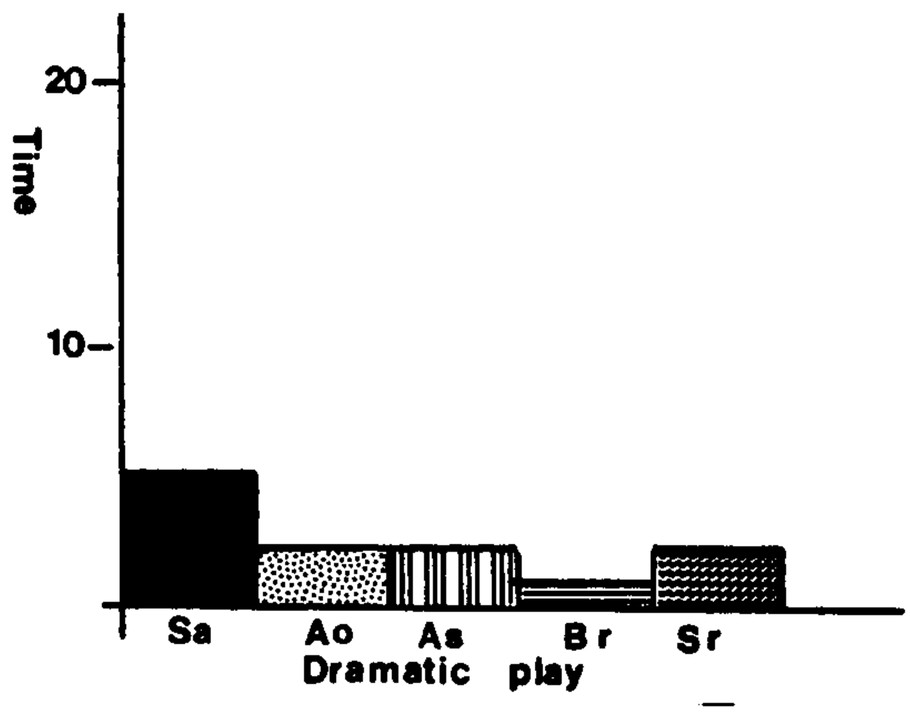
This is shown in Tables 28 to 35;the results suqqest strong individual differences in the frequency of verbalisation. 'No verbalisation' is very high, being over 50% for seven children, only one child appears to be articulating considerably more than others. The percentage of verbalisation across children range between 37% to 75%. Children have talked to one another in forms of monoloque but dialogue is the predominant category of verbalisation sampled for all 8 children. Soliloquy exists in all cases but is very infrequent. There is overlap between boys and girls in terms of the categories of verbalisation and the differences are not significant.

The followinq 8 tables (36 to 43) show the amount of dramatic play which occurred in each individual case during the course of data collection.

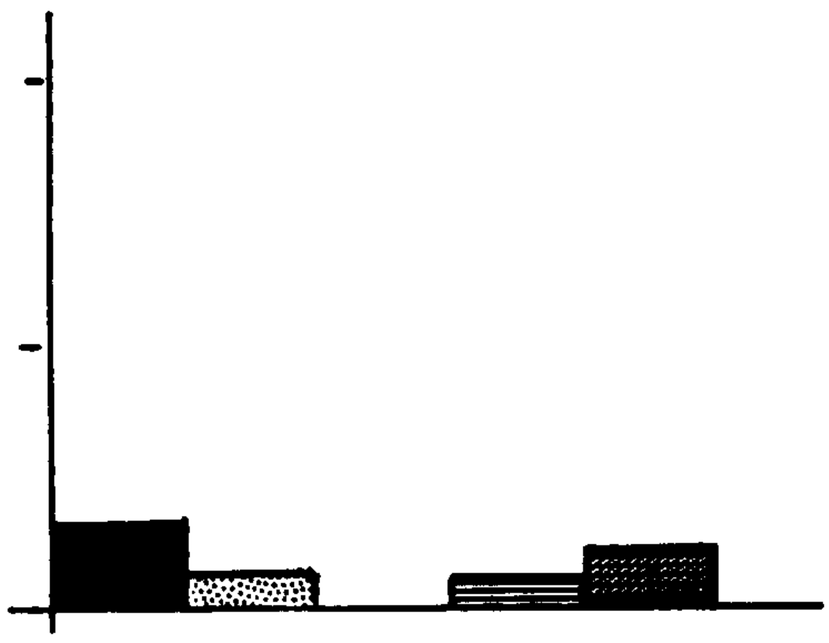
DRAMATIC PLAY

The following Tables represent the time spent on Dramatic play.
Categories are: Self agent (Sa), Active other agent(Ao), Behavioural role(Br), Social role(Sr).

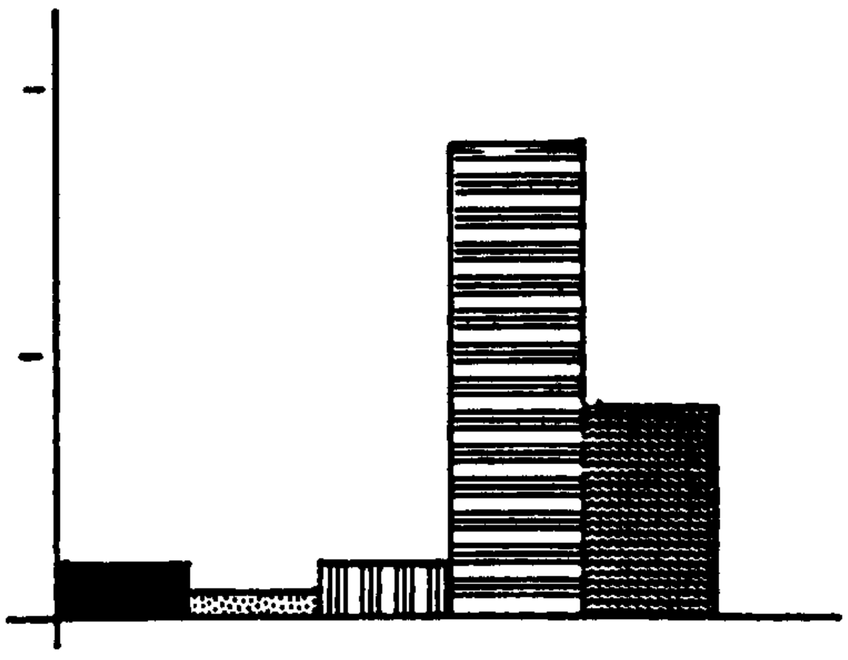
(Table 36 gI)



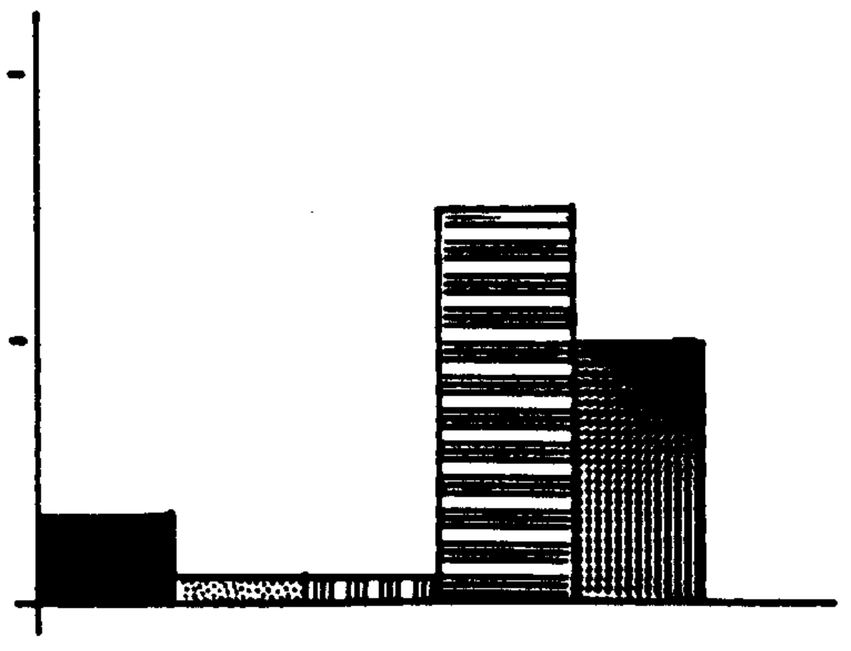
(Table 37 gII)



(Table 38 gIII)



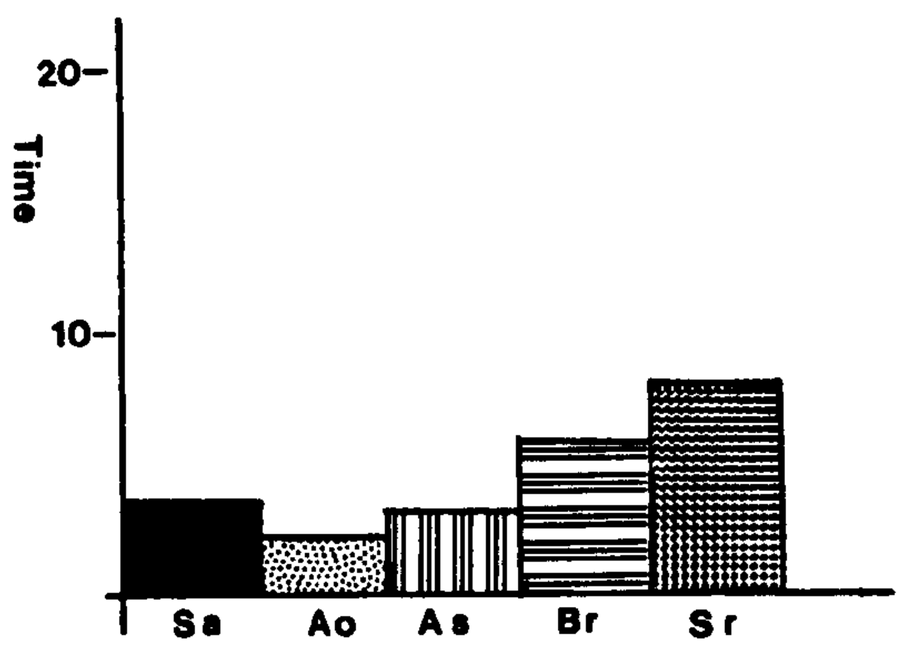
(Table 39 gIV)



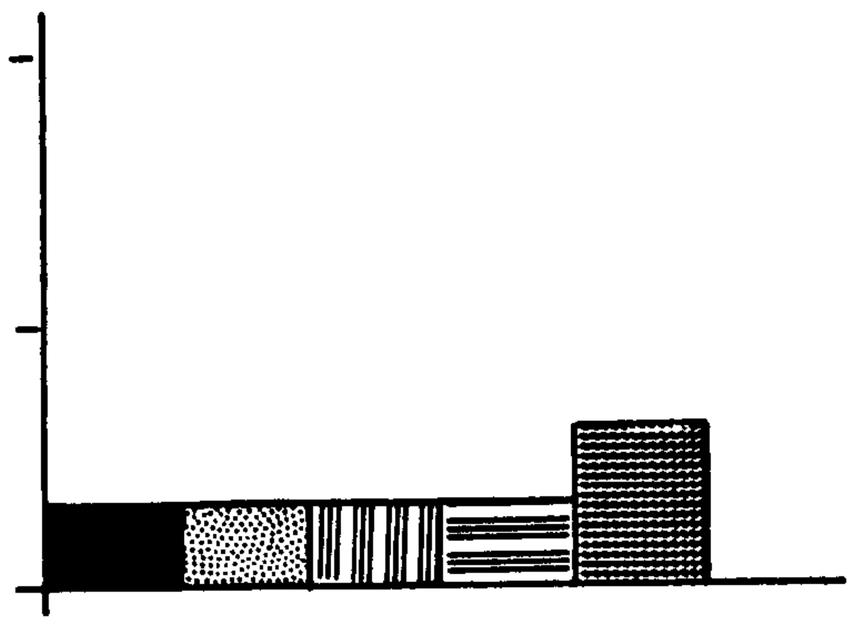
DRAMATIC PLAY

Categories are: Self agent(Sa), Active other agent(Ao), Behavioural role(Br), Social role(Sr).

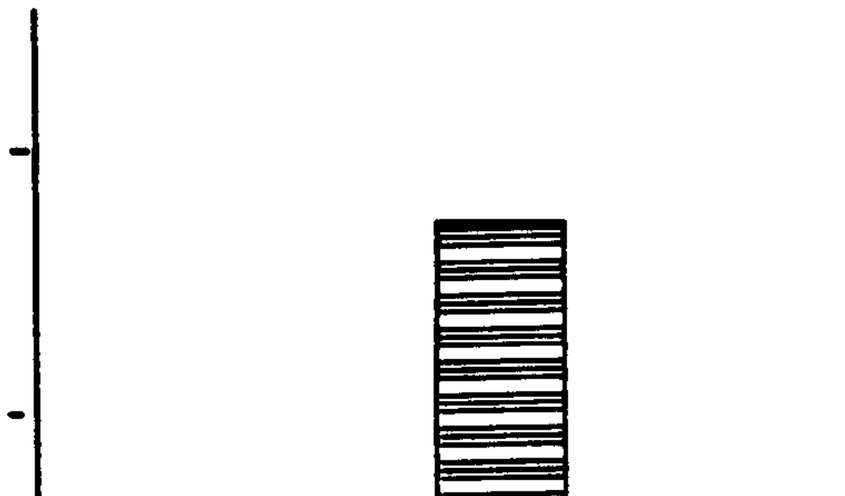
(Table 40 bI)



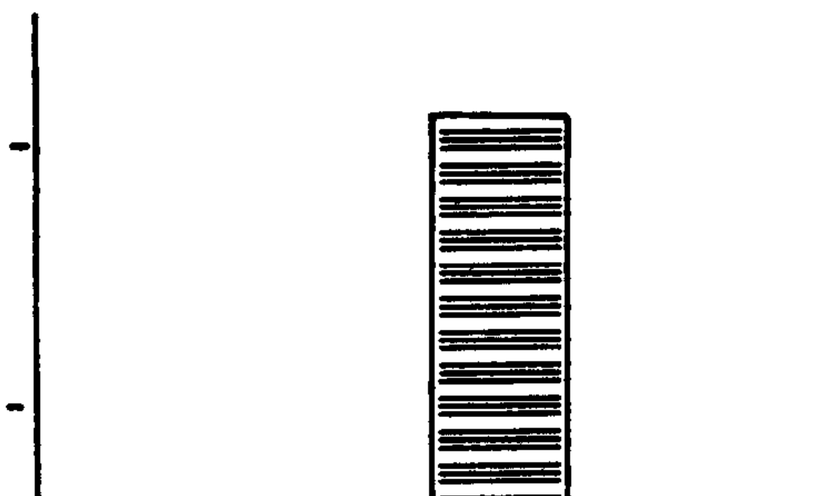
(Table 41 bII)



(Table 42 bIII)



(Table 43 bIV)



Dramatic play and individual differences.

This is shown in Tables 36 to 43;the results suggest strong individual differences in type of dramatic play. Only two children appeared predominantly in the dramatic form of play (range 43% to 52%); the other 6 children showed relatively very little play of this type (range 10% to 21%). 'Self agent' exists in all cases. A relatively low percentage of the time was spent on 'active other agent' by six children. Two children never appeared in this form of dramatic play at all. 'Active substitute agent' exists in only 5 cases. 'Behavioural role' as the most frequent occurrence was observed in four cases, and social role in two cases.

Qualitative and quantitative profiles compared.

The following is a comparison between the sources of information (descriptive material and observational data) for each individual child. The different sources of information (teacher's assessment, mother's statement and the investigator's notes) suggest some inconsistency. Nevertheless, these discrepancies indicate: on the one hand the limitation within each source of information; on the other hand it shows the importance of complementary information in studying children's play behaviour.

chapter 3: play profile.

qI

She is described by her teacher as being a difficult child to assess (see appendix D), who needed adult attention. Her mother also shared this view. She was mainly left with the next door neighbour who happened to be an elderly lady (as a minder). She had the experience of her parents' separation. During the following year it was learnt that she was suffering from a hearing problem in her left ear. This undoubtedly contributed to her 'difficult behaviour'. Her predominant pattern of play behaviour can be classified as constructive. She would prefer to take a passive role in play situation most of the time. E.g. when playing fantasy she would choose to be the 'baby' and to be 'looked after' by other players.

Despite her teacher's comment that she liked to play in close proximity with adults, it can be inferred from the data on her play behaviour that she appeared predominantly to be a solitary child. Taking all the information into account, it appears that the child was mainly in need of 'adult's attention', rather than playing with her age mates. When she played with her mates particularly in fantasy episodes she took passive role or played 'baby'. It might be the case that in the absence of adults alternatively, she

prefered to be indulged by other play-mates. This composation might have satisfied her needs with regard to 'attention' she was seeking. According to her mother: 'she is very articulate, but rather babish. She needs too much attention, and she tries her best to seek it'.

According to her teacher: 'she enjoys playing in close proximity to adults and talking to them..'.

As can be inferred from the data on level of complexity, solitary play in this case did not result from maturity in play behaviour as suggested by Rubin (1982). On the complexity level she appeared predominantly at play level III. Very little dialoque is shown in her chart.

gII

She is described as beinq hiqhly intelligent and solitary by both her mother and teacher. She had not had the opportunity of playinq with her aqe-mates at home because of her parents' attitude. She was looked after by her qranny. She had plenty of access to books and study. The pattern of her play behaviour suqqests that she prefered constructive play to other types of play activities. She appeared to be the least playful child amonqst the tarqet children. Accordinq to the data she had either watched other children, not playinq herself, or played at a rather advanced level. Predominantly she appeared at play level IV. The pattern of her social participation does not support the idea of a solitary child in her case. She was not particularly articulate durinq play where as in communicating with aduls she did not show any problems at all.

qIII

Shyness, dependency, jealousy and school refusal were the characteristics which have been attributed to her by her mother and her teacher (see appendix D). She did not appear to be very playful but could keep herself occupied. She enjoyed helping the nursery staff during the nursery hours and preferred doing that to playing with other children. Amongst the diffeent types of play, she appeared predominantly in constructive play. She was not a solitary child, and appeared predominantly engaged in activities at complexity level IV. The complexity level and degree of verbalisation in her case, according to the data, is the highest amongst the girls and fourth amongst the target children (boys and girls). I learnt that she was supposed to leave the nursery school somewhat early in the third term, which was earlier than it was expected. Therefore, in order to keep the amount of data standardised for all subjects, it was decided to collect twice as much data as for the other subjects over the period of her last month.

qIV

She is described as both sensitive and confused as a result of the marriage breakdown of her parents. Both her teacher and her mother were of the opinion that she was 'suffering'. The daily report in her case suggested that she had quite eventful days as if the mother was trying her best to keep her occupied. Almost every day she had friend/s staying with her overnight. She could be classified as 'constructive' play oriented from her data but an approximately equal proportion of her time had been spent in dramatic play. Solitary play accounted for a little over half of her play but, obviously, nearly as much took place in association with other children in play situations. In terms of complexity level her play predominantly appeared at level IV; low verbalisation and a high level of soliloquy have been suggested by her data. With regard to verbalisation some similarities between qI and qIV can be inferred from the data. With regard to the home background both children had experienced the separation of their parents.

chapter 3: play profile.

bI

'Extremely articulate, imaginative, and reasonably bright' was how he had been described by the teacher and his mother. He had the opportunity to play with his age-mates from the nursery, with neighbourhood friends and with relatives. Despite the opinion of his mother and the teacher he appeared to prefer constructional toys or appeared to be constructive player. He also predominantly appeared in associative form of social play. In terms of complexity level he appeared most frequently at play level III. According to his data he appeared to be the second most articulate child amongst the target children during the course of observation. This may have been due to the parents' attention.

chapter 3: play profile.

bII

He was described as a reasonably bright child by his teacher and very shy by his mother. He came from a very stimulating and loving, caring home. His mother was very carefully organising his daily life and trying to make it very eventful. He also had the opportunity of having children around from the nursery, the neighbourhood and relatives. He did not appear to be particularly playful, and preferred constructive play to other types. He was not a solitary child and took part almost equally in associative and cooperative social play. With regard to the complexity level he appeared predominantly at level III. He was fairly articulate which could be related to the parents' attention.

bIII

Both his teacher and his mother described him as being reasonably bright, imaginative and very relaxed. The investigator also shared this view. He preferred to be with children all the time and his parents indulged him in this. He was one of the two boys who could be classified as 'fantasy' players. According to the data he is the second most imaginative by his overt behaviour amongst the target children, and also next to the most cooperative player. He predominantly took part in the cooperative form of social play, at complexity level IV. He did not appear to be the most articulate child. He had a special way of talking (babyish) and it was combined with laughter and jokes. This could be related to the treatment he received at home, which was seen as indulgent. He also would prefer children to adult to be accompanied with; this may be regarded as an influential factor.

bIV

He was considered to be extremely bright and articulate; very advanced in regard to his expressive language. This was the opinion of both his mother and the teacher. It was strictly forbidden for him to have a play mate at home, but the parents would spend quite a considerable time playing with him. He was extremely popular with both children and staff. According to the data he appeared to be the most imaginative child amongst the target children and played the highest rate of fantasy play in the nursery by the nursery from the teacher's viewpoint. He took part predominantly in cooperative social play and mainly at complexity level IV. Also according to the data he was the most articulate child amongst the target children. This could perhaps be related to the amount of contact with his parents at home.

Overall conclusions.

Play is defined as spontaneous activity which occurs in response to the children's needs and wishes, the children being reasonably free. Despite research efforts, psychologist have relatively little insight into whether or not play is beneficial. It is felt that to reach a conclusion on this one would need a different approach. It was hypothesised in this study that the function of play, if any, is related to the time each individual child spent in different forms of play. A close look at the free activity choice time shows that variation across the children appears to be remarkable. In the rich, stimulating environment of the nursery school which offered what could be described as a non-directive environment, where children were reasonably free to do whatever they wanted to do, for some reason the majority of the target children did not, most of the time, manage to occupy themselves 'actively'. Children obviously are not expected to be capable of occupying themselves 100% of the time. Also it is not to deny that children may learn through watching and listening or any sources other than being involved themselves. But if active engagement is valuable or of any importance at all, as it can be inferred from the data this can not be achieved successfully in the

majority of cases through 'free activity choice time'. Furthermore the result do not show the amount of social, and verbal communication to be very often in the majority of cases. This may be related to a lack of 'motivation'. However, according to the data, some cases, did not manage to occupy themselves in play activity. Perhaps children were in need of some type of stimulation other than just being left with the play materials. For example, they may have required active participation of adults to some extent more than structuring the environment only. Such adult intervention could be of help in different dimensions: play tutoring in which adults are directly involved; or alternatively the adult might organise the environment not only with regard to the activities and materials but also in organising groups. They may consciously group children or bring together' more playful' children with 'less playful' ones depending on the requirement of the children individually. The importance of active participation of adults in children's activities may be inferred from the qualitative information obtained about the target children, in that children who received more attention from their parents were described as articulate and advanced in expressive language.

Furthermore it can be inferred that for some reason

children take part in one type of play more than in others. In other words, children of the same age, for reasons not yet clear, take part in different types of play from each other. To decide whether or not play is functional, the activity in which the player appears most, in conjunction with the time factor, should be examined, as it is a plausible hypothesis that different types of play offer children different opportunities (this hypothesis is the focus of Chapter Five).

A comparison between the qualitative and quantitative data suggest that home background may be influential in the pattern of behaviour ('playfulness', sociablity and verbalisation) in the nursery school; for example, the attitude of the parents as to whether or not they should spare the child some time to play with her/him, or whether or not playing with age-mates is considered beneficial. The parents' relationship with each other also seeme to be influential. During the course of parental separation children may be disturbed and lack motivation to play. However, these suggestions need careful consideration and further investigation, since the findings of this study are based on a limited number of subjects from one nursery school. However, the amount of data in each individual case is sufficient for reliable inferences. Since the nursery

school is a typical one and the target children were physically normal and also no mental abnormality was found about them, the result should provide useful guidelines for further studies. The implication of play profiles can be both academic and practical. From the academic point of view it is essential to consider such fundamental factors as the time spent in play, and play preference, in studying the function of play. From the practical point of view such study may be of use to those who are involved with children in their daily life, particularly educators, nursery staff and leisure organisers.

From research point of view, methodologically, it is essential to consider the limitation That exists within each method of studying children's play behaviour.

A comparison between the observational data and information obtained from other sources (teacher's assessment, mother's starement, and the investigator's notes) suggest that direct observation on its own, and without being complemented through another sources. A comparison accross the different sources through which information and data have been obtained and analysed in this chapter, only indicates the lack of consistency. This however has been discussed in detail later in Chapter Eight.

CHAPTER FOUR

A comparative analysis of different types of play

The most relevant previous studies concerned with the 'types of play' can be placed in the following major categories:

(i) Different types of play relating to the manipulation of objects.

(ii) Different types of play material and the effects on play behaviour.

Previous research in these areas will be discussed in turn.

(i) Different types of play activity

Many investigators have distinguished between different forms of play (Schiller, 1795; Spencer, 1872; Groos, 1901; Parten, 1932; Buhler, 1935; Isaacs, 1935; Valentine, 1942; Piaget, 1951; Smilansky, 1968; Kalverboer, 1974). These qualitative distinctions, based primarily on the manipulation of objects, take into account the degree of complexity of the play activity as a whole as it bears on the development of the child's mind (Buhler, 1935; Isaacs, 1935; Valentine, 1942).

One of the category scheme proposes a sequential

development for play activities from Functional play to Constructive play, to Dramatic play, and finally to games with rules (Smilansky, 1968). Some investigators have classified play activities according to the complexity of the overt behaviour of the player/s and to the number of toys involved in the play situation, from levels I to IV (Kalverboer, 1974); some have concentrated on the social context of play: for example, from that which can be described as unoccupied, onlooker, Solitary play, Parallel play, Associative play, and finally, to the Cooperative form of play (Parten, 1932). A number of investigators more specifically concerned themselves with the particular form of Dramatic/fantasy play and classified it (Fein, 1978, 1979; Watson & Fischer, 1980) from self agent, active other agent, active substitute agent, behavioural role and social role. As the research interest in this field increased the sequential schemes were regarded as a Parallel development to the general cognitive, social and social/cognitive development in the preschool years.

Previous work in this respect is mainly descriptive, but some speculations have been advanced concerning the functional significance of play types. Constructive play is seen as significant in the growth of problem solving skills (Bruner, 1972; Sutton Smith, 1968; Vandenberg, 1980). Dramatic play (often called symbolic, fantasy or imaginary

play), has been the subject of postulations and hypotheses in psychology and education in relation to normal, disturbed and disadvantaged children. These are considered in the next section. The 'games with rules' category has also been studied. It is omitted from further consideration for the purposes of this study because this type of activity has a special and idiosyncratic meaning and use in the nursery school, being typically organised by nursery staff.

The significance of fantasy

As with the generic term 'play', Dramatic/fantasy play has, to date, escaped satisfactory definition. It is often defined as 'designative' behaviour distinguishable from 'exploratory' behaviour; it is non-literal and out of context. However, to take dressing up as adults as an example, this activity may be regarded as designative; thus it is difficult to define (El'Konin, 1969; Huttenlocher and Higgins, 1978).

The significance of Dramatic/fantasy play has been reported by a number of studies which claim that such play is helpful in the development of major areas of a child's competence, namely the areas of social skills, intellectual growth and creativity (Smilansky, 1968; Feitelson and Ross,

1973; Saltz and Johnson, 1974; Rosen,1974; Rubin, 1980). Furthermore, such investigations have documented a correlation between the level and amount of Dramatic play with the age and socio-economic background of the child (Rubin, Maioni and Hornung, 1976; Pellegrini, 1981). Such findings have led to the active encouragement or tuition of this kind of play in order to nourish the development of cognitive and social/cognitive skills (Marshall and Hahn, 1967; Feitelson, 1972; Freyberg, 1973). Moreover it has been suggested that fantasy play is especially important for problem-solving and for making an activity more complex and therefore all the more useful for learning (Dansky, 1980).

Smith (1982) also postulated that:

"Fantasy provides play - which would otherwise be sensorimotor or 'practice' play - with internal goals which can structure it and bring it to a more useful level of complexity."

Similarly it is argued that:

"competence is fostered by activities with clear goal structure because they concentrate the mind and instil confidence in one's own power...the childish version of 'by jove I did it'. But lest people toss away the sand and dough, we feel we should emphasise the importance of these unstructured materials for the way they encourage chatting amongst children and provide moderatescope for complex thought. Pretending comes in for special mention for while some of it is the tired 'home corner litany', it provides practice in the social negotiation of goals and that is why children stay at make-believe games for long spells of time" (Sylva, Roy & Painter, 1980 p. 224).

chapter 4: comparative analysis

Different types of play material

Play materials and their effects on children's behaviour for play purposes may be regarded as one of the most popular topics of past research, often initiated by industrial and commercial interests. The earlier investigators (as early as the 1920s or 1930s; see also Smith and Connolly, 1980) concentrated on the preference for certain kinds of toys shown by children of different ages and sex. The results of such experimentation and observation have led to the current popularity of age-related toys, 'educational' toys and certain materials in nursery education such as clay and paint. The effects of different types of material have been looked at from such view points as: the effects of particular types of toy (Turner & Goldsmith, 1976; Rubin & Seible, 1979); and the effects of play material on social participationduring play and play materials with special 'task demands' (Bjorklund, 1979; Pepler, 1979).

The number of toys, the effects of a toy in regard to symbolic representation in play, novelty, relative complexity, and familiarity of the play materials are characteristics considered by earlier studies (Gramza, 1976; Tizard, 1977; Muller and Brenner, 1977; Eckerman & Whatley, 1977; Elder & Pederson, 1978; Gower, 1978).

Looking at the studies relating to the types of

material which are mainly documented from observational data in free play situation, I feel that it is necessary to reserve judgement on the categorisation used by the researchers in that, for example, what appears to be a 'constructional' toy choice may be a fantasy toy choice. For instance a child may set up a 'symbolic play' within the frame of 'constructional' toy of which the 'theme' is known by the child but might not be distinguishable by the observer. As it is pointed out by Krasnor and Pepler (1980), this possibility of confusion cannot be ruled out when children are observed at their natural free play. As we have seen, one body of research tends to look at the play objects chosen and categorise these play objects; the other body of research attempts to perceive how these objects are in fact used. Thus, the above mentioned factors militate against the establishment of consistencies across different studies.

A number of recent studies combined cognitive and social categories in regard to social class differences (Rubin, Maioni & Hornung, 1976); formal and discovery education (Johnson & Ershler, 1981); different learning systems and participants (number of children and adults present) in those learning centres (Pellegrini, 1984). These studies reported that the occurence of Constructive play episodes was associated with Associative play, Dramatic

play with co-operative social form of play, and Functional play with Solitary social play.

These associations were addressed to such variables as 'social class' differences, the presence of contextual variables and differences in learning other than relationship between social and cognitive elements when play takes place in a social environment. After all, the developmental superiority of Dramatic play compared with other types of activity has largely remained unexplored; detailed observation could show whether the child engages in more mature forms of activity, when in this kind of play.

The focus of attention in the present chapter is to examine the behavioural significance of different types of activity (No play, Transition, Functional, Constructive, Dramatic). They were tabulated with respect to the co-occurrence of categories of social participation (unoccupied, onlooker, Solitary, Parallel, Associative and co-operative), complexity level (1 - 4), and verbalisation (Monologue, Dialogue, Soliloquy). The results are shown in Tables 44 to 67.

The analysis uses the data already reported in the preceding chapter.

(Table 44)

Tabulation of type of activity by level of complexity

In each cell the top number is the number of occurrences; the bottom is the column percentage.

gI

Level of complexity	No play	Tran	Fun	Con	Dra	Total
Unocc	161 15.2					161
Onlooker	362 34.2					362
Solitary	97 9.2	199 67.5	133 36.9	240 24.8	31 9.7	700
Parallel		16 5.4	78 21.7	358 36.9	44 13.8	496
Associative	438 41.4	80 27.1	149 41.4	169 17.4	22 6.9	858
Cooperative				202 20.8	221 69.5	423
Total	1058	295	360	969	318	3000

(Table 45)
gII

Level of complexity	No Play	Tran	Fun	Con	Dra	Total
Unocc	63 4.4					63
Onlooker	638 44.9					638
Solitary	21 1.5	63 63.8	88 41.5	293 30.3	111 49.6	576
Parallel			98 45.2	276 28.6	24 10.7	398
Associative	699 49.2	31 33.0	22 10.4	206 21.3	20 8.9	978
Cooperative			4	190 19.7	69 30.8	347 *
Total	1421	94	212	965	224	3000

* 84 scored as Games (omitted from Table).

(Table 46)

Tabulation of type of activity by level of complexity

In each cell the top number is the number of occurrences; the bottom is the column percentage.

gIII

Level of complexity	No play	Tran	Fun	Con	Dra	Total
Unocc	7 1.1					7
Onlooker	72 11.4					72
Solitary	19 3.1	37 52.9	52 42.3	254 20.6	166 17.7	531
Parallel			11 8.9	142 11.4		153
Associative	520 84.1	33 47.1	55 44.7	415 33.3	91 9.7	1114
Cooperative			5 4.1	431 34.6	681 72.6	1123 *
Total	618	70	123	1245	938	3000

* Also 6 scored as Game (omitted from Table).

(Table 47)
gIV

Level of complexity	No Play	Tran	Fun	Con	Dra	Total
Unocc	42 4.5					42
Onlooker	242 25.9					242
Solitary	102 10.9	74 68.5	101 61.2	228 36.3	284 33.4	899
Parallel			26 15.8	211 22.7	12 1.4	249
Associative	547 58.6	34 31.5	38 23.0	176 18.9	60 7.1	855
Cooperative				206 22.1	495 58.2	713 **
Total	933	108	165	931	851	3000

* 84 scored as Game (omitted from Table).

(Table 48)

Tabulation of activites by social participation

In each cell the top number is the number of occurrences; the bottom is the column percentage.

bI

Level of complexity	No play	Tran	Fun	Con	Dra	Total
Unocc	44 2.2					44
Onlooker	655 66.1					655
Solitary	77 7.3	147 84.5	33 14.7	137 15.7	10 1.577	404
Parallel			24 71.4	116 13.3	9 1.419	149
Associative	311 29.3	20 11.5	160 71.4	353 40.5	51 8.044	895
Cooperative				267 30.2	556 87.69	853
Total	1058	174	224	872	634	3000

(Table 49)
bII

Level of complexity	No Play	Tran	Fun	Con	Dra	Total
Unocc	33 3.2					33
Onlooker	323 33.0					323
Solitary	119 12.2	117 75.0	211 53.4	131 14.1	42 7.8	620
Parallel			54 13.7	117 12.6	8 1.5	179
Associative	504 51.6	38 24.4	130 32.9	450 48.3	135 25.0	1257
Cooperative				234 25.0	356 65.8	590
Total	977	156	395	931	541	3000

(Table 50)

Tabulation of activities by social participation

In each cell the top number is the number of occurrences; the bottom is the column percentage.

bIII

Level of complexity	No play	Tran	Fun	Con	Dra	Total
Unocc	13 1.9					13
Onlooker	177 30.1					177
Solitary	9 1.6	118 86.8	31 25.8	247 34.6	234 16.1	639
Parallel			31 25.8	141 19.7	14 1.0	186
Association	382 66.4	12 8.8	58 48.3	130 18.2	48 3.3	630
Cooperative				196 27.5	1159 79.7	1355
Total	618	70	123	145	938	3000

(Table 51)
bIV

Level of complexity	No Play	Tran	Fun	Con	Dra	Total
Unocc	4 0.3					4
Onlooker	121 37.2					121
Solitary	1 0.3	48 44.9	26 28.9	190 23.7	148 8.8	413
Parallel			17 17.8	199 24.8	36 2.1	252
Associative	201 62.2	57 53.3	47 52.2	168 21.0	175 10.4	648
Cooperative				244 30.5	1318 78.6	1562
Total	325	107	90	801	1677	3000

A Comparative Analysis between Different types of Activities in terms of Social participation.

Tables 44 to 51 represent the tabulations of the types of activities (No play, Transition, Functional, Constructive, Dramatic) by social participation (Unoccupied, Onlooker, Solitary, Parallel, Associative, and Cooperative).

Examining the tables, the results reveal that the occurrence of those activities under the heading of No play were either associated with Unoccupied, Onlooker, and Solitary, or if they occurred in the form of group activity, they were limited to only the Associative form.

Transition, which refers to the termination of one activity or preparation for another activity occurred in association with either Solitary or Associative categories. The result is consistent across all 8 boys and girls.

Functional play is most frequent in association with the Solitary (range between 14.7% to 61.2%), Parallel (range between 8.9% to 71.4%), and Associative (range between 14% to 61%) categories. In only two children a limited number of intervals were recorded in which Functional play occurred with Cooperative social participation. This is questionable and will be dealt with in Chapter 7 and 8.

Constructive play episodes were associated with

Solitary (range between 14.1% to 36.3%), Parallel (range between 11.4% to 36.9%), Associative (range between 17.4% to 48.3%), and Cooperative (range between 19.7% to 34.6%) categories.

Dramatic play most frequently occurred with Solitary (range between 1.6% to 49.6%), Parallel (range between 0 to13.8%), Associative (range between 3.3% to 25.0%), and Cooperative (range between 30.8 to 87.69%) categories of social participation. This type of play, in 7 out of 8 children and more than 58% of the episodes, occurred with Cooperative social participation. Amongst the different types of play, Dramatic play appears to be the one most frequently associated with Cooperative social participation, as the opposite extreme to Functional play. Comparing Constructive and Dramatic play, Constructive play is most frequently Associative whereas Dramatic play is most frequently Cooperative. Comparing 'non-play' activities (No play and Transition), with 'Play' activities (Functional, Constructive, Dramatic), non-play activities appear most frequently under the headings of Unoccupied, Onlooker and Solitary and Associative, whereas play activities occur most frequently in the forms of Associative and Cooperative. Unoccupied and Onlooker behaviours are associated with activities recorded as 'non-play' (No play and Transition). Solitary participations can be seen in all sorts of

activities (play and non-play). Parallel participation is most frequent only during play type activities. Associative participation may occur in all types of activities, play and non-play, whereas Cooperative behaviours are limited to the mature types of play: Constructive and Dramatic episodes. Only nine incidences of Functional play appeared as Cooperative participation, in two children; this will receive further consideration later in this study. The overall patterns suggest strong individual differences, nevertheless the above results are consistent across the target subjects. No significant sex differences can be inferred.

(Table 52)

Tabulation of type of activity by level of complexity

In each cell the top number is the number of occurrences; the bottom is the column percentage.

gI

Level of complexity	No play	Tran	Fun	Con	Dra	Total
0	1058 100.0	295 100.0				1353
I			360 100.0			360
II				419 43.0		419
III				526 53.9	255 80.2	781
IV				30 3.1	63 19.8	93
Total	1058	295	360	969	318	3000

(Table 53)
gII

Level of complexity	No Play	Tran	Fun	Con	Dra	Total
0	1421 100.0	94 100.0				1515
I			212 100.0			212
II				268 27.2		268
III				338 35.0	143 63.8	481
IV				360 37.3	81 36.2	525 *
Total	1421	94	212	965	224	3000

* 84 scored as Games (omitted from Table).

(Table 54)

Tabulation of type of activity by level of complexity

In each cell the top number is the number of occurrences; the bottom is the column percentage.

gIII

Level of complexity	No play	Tran	Fun	Con	Dra	Total
0	618 100.0	70 100.0				688
I			123 100.0			123
II				313 25.1		313
III				670 53.8	113 12.0	783
IV				262 21.0	825 88.0	1093 *
Total	618	70	123	1245	938	3000

(Table 55)
gIV

Level of complexity	No Play	Tran	Fun	Con	Dra	Total
0	933 100.0	108 100.0				1041
I			165 100.0			165
II				109 11.7		109
III				601 64.6	103 12.1	705
IV				221 23.7	748 87.9	981 **
Total	933	108	165	931	851	3000

** 12 scored as Games (omitted from Table).

(Table 56)

Tabulation of type of activity by level of complexity

In each cell the top number is the number of occurrences; the bottom is the column percentage.

bI

Level of complexity	No play	Tran	Fun	Con	Dra	Total
0	1066 100.0	174 100.0				1230
I			224 100.0			223
II				109 12.5		109
III				577 66.2	194 30.6	777
IV				186 21.3	440 69.4	658 *
Total	1066	174	224	872	634	3000

* Also 30 scored as Games (omitted from Table).

(Table 57)
bII

Level of complexity	No Play	Tran	Fun	Con	Dra	Total
0	977 100.0	156 100.0				1133
I			393 100.0			393
II				331 35.5		331
III				511 54.8	248 45.8	759
IV				91 9.7	243 54.2	384
Total	977	156	393	933	541	3000

(Table 58)

Tabulation of type of activity by level of complexity

In each cell the top number is the number of occurrences; the bottom is the column percentage.

bIII

Level of complexity	No play	Tran	Fun	Con	Dra	Total
0	575 100.0	136 100.0				711
I			117 100.0			117
II				178 24.8		178
III				366 51.1	44 3.0	410
IV				173 24.1	1411 97.0	1584
Total	575	136	117	717	1455	3000

(Table 57)
bII

Level of complexity	No Play	Tran	Fun	Con	Dra	Total
0	325 100.0	107 100.0				432
I			90 100.0			90
II				185 23.1		185
III				409 51.1	111 6.6	520
IV				207 25.8	1566 93.4	1773
Total	325	107	90	801	1677	3000

A comparative Analysis between Different types of Activities in terms of Level of Complexity.

Examining Tables 52 to 59, No play and Transition episodes are associated with complexity level 0. Functional play episodes have been seen at level 1. Constructive play episodes fall into levels 2, 3, and 4, whereas Dramatic play episodes fall into complexity levels 3 and 4. Conversely, comparing the two types of activity, play and non-play, it appears that the more mature forms of social participation are associated with play activities. Activities at complexity level 0 associated with those activities recorded as non-play. Level 1 complexity is limited to Functional play. Activities at complexity level 2 occurred as Constructive play. Activities at complexity level 3 and 4 were recorded as Constructive and Dramatic play. Between Constructive and Dramatic play episodes, Dramatic play most frequently appeared at complexity level 4 whereas Constructive play most frequently appeared at complexity level 3. The results are consistent across 7 out of the 8 children. No significant sex differences can be inferred.

(Table 60)

Tabulation of type of activities, by verbalisation

In each cell the top number is the number of occurrences; the bottom is the column percentage.

Note :
0 No verbalisation.
→ Monologue (talking to playmate/s).
← Monologue (to be talked to by playmate/s).
⇄ Dialogue (a proper conversation between the target child and playmate/s).
↔ Soliloquy (talking to him/herself).

gI

	No play	Tran	Fun	Con	Dra	Total
0	797 75.3	256 86.8	242 67.2	634 65.4	80 25.2	2009
→	78 7.4	16 5.4	31 8.6	79 8.2	40 12.6	244
←	42 4.0	5 1.7	10 2.8	50 5.2	21 6.6	128
⇄	141 13.3	18 6.1	75 20.8	185 19.1	167 52.5	586
↔			2 0.6	21 2.0	10 3.1	33
Total	1058	295	360	969	318	3000

(Table 61)
gII

	No Play	Tran	Fun	Con	Dra	Game	Total
0	1254 88.2	85 90.4	180 84.9	702 72.8	48 21.4	6 7.1	2276
→	47 3.3	3 3.2	10 4.7	48 5.0	10 4.5	26 31.0	144
←	36 2.5	3 3.2	2 0.9	59 6.1	6 2.7	45 53.6	151
⇄	83 5.8	2 2.1	15 7.1	122 12.6	55 24.6	7 8.3	284
↔	1 0.1	1 0.1	5 2.4	33 3.4	105 46.9		145 *
Total	1421	94	212	965	224	84	3000

* also 84 recorded as Game (omitted from Table).

(Table 62)

Tabulation of type of activities, by verbalisation

In each cell the top number is the number of occurrences; the bottom is the column percentage.

Note :
0 No verbalisation.
→ Monologue (talking to playmate/s).
← Monologue (to be talked to by playmate/s).
⇄ Dialogue (a proper conversation between the target child and playmate/s).
↔ Soliloquy (talking to him/herself).

gIII

	No Play	Tran	Fun	Con	Dra	Game	Total
0	572 92.6	61 87.1	88 71.5	786 63.1	208 22.2	3 50.0	1718
→	18 2.9	3 4.3		112 9.0	42 4.5	1 16.7	176
←	4 0.6		1 0.8	60 4.8	59 6.3	1 16.7	125
⇄	24 3.9	5 7.1	27 22.0	277 22.2	584 62.3	1 16.7	918
↔		1 1.4	7 5.7	10 0.8	45 4.8		63 *
Total	618	70	123	1245	938	6	3000

* also 4 recorded as Game (omitted from Table).

(Table 63)
gIV

	No Play	Tran	Fun	Con	Dra	Game	Total
0	884 94.7	88 81.5	124 75.2	661 71.0	232 27.3	4 33.3	1993
→	10 1.1	4 3.7	4 2.4	33 3.5	52 6.1	3 25.0	106
←	17 1.8	4 3.7	9 5.5	87 9.3	160 18.8	3 25.0	280
⇄	22 2.4	6 5.6	8 4.8	101 10.8	255 30.6	2 16.7	304
↔		6 5.6	20 2.1	49 5.3	152 17.9		227 **
Total	933	108	165	931	851	12	3000

** also 12 recorded as Game (omitted from Table).

(Table 64)

Tabulation of type of activities, by verbalisation

In each cell the top number is the number of occurrences; the bottom is the column percentage.

Note :
0 No verbalisation.
→ Monologue (talking to playmate/s).
← Monologue (to be talked to by playmate/s).
⇄ Dialogue (a proper conversation between the target child and playmate/s).
↔ Soliloquy (talking to him/herself).

bI

	No Play	Tran	Fun	Con	Dra	Game	Total
0	846 79.5	159 90.2	95 42.4	449 51.5	75 11.8	7 23.3	1629
→	50 4.7	3 1.7	8 3.6	38 4.4	46 7.3	1 3.3	146
←	38 3.6		18 7.1	29 3.3	23 3.6	22 73.3	130
⇄	136 12.2	12 6.9	105 46.9	355 40.7	482 76.0		1086
↔				1 0.1	8 1.3		9 *
Total	1058	172	226	880	634	30	3000

(Table 65)
bII

	No Play	Tran	Fun	Con	Dra	Game	Total
0	854 87.4	133 85.3	294 74.4	437 46.9	72 13.3		1790
→	26 2.7	2 1.3	17 4.3	40 4.3	22 4.1		107
←	29 3.0	12 0.08	25 3.0	5 2.7	0.9		71
⇄	65 6.7	21 13.5	69 17.5	425 45.6	430 79.5*		1010
↔	3 0.3		3	4 0.4	12 2.2		22
Total	977	156	393	933	541		3000

* also recorded as Game (omitted from Table).

(Table 66)

Tabulation of type of activities, by verbalisation

In each cell the top number is the number of occurrences; the bottom is the column percentage.

Note :
0 No verbalisation.
→ Monologue (talking to playmate/s).
← Monologue (to be talked to by playmate/s).
⇄ Dialogue (a proper conversation between the target child and playmate/s).
↔ Soliloquy (talking to him/herself).

bIII

	No Play	Tran	Fun	Con	Dra	Game	Total
0	533 92.7	124 91.2	80 66.7	550 77	935 27.1		1682
→	16 2.8	5 3.7	9 7.5	64 9.0	95 6.5		189
←	11 1.9	2 1.5	9 7.5	35 4.9	151 10.4		208
⇄	15 2.6	4 2.9	14 11.7	55 7.7	705 48.5		793
↔			8 6.7	10 1.4	109 7.5		128
Total	575	136	117	714	1955		3000

(Table 67)
bIV

	No Play	Tran	Fun	Con	Dra	Game	Total
0	276 84.8	76 71.0	44 48.9	440 54.9	269 16.0		1105
→	20 6.2	12 11.2	11 12.2	76 9.5	173 10.3		292
←	7 2.2	3 2.8	3 3.3	25 3.1	111 6.6		149
⇄	22 6.8	15 14.0	19 21.1	200 25.0	1033 61.6		1289
↔			13 14.4	60 7.5	91 5.4		165
Total	325	107	90	801	1677		3000

A comparative Analysis between Different types of Activities in terms of Verbalisation.

Examining the Tables 60 to 67, it appears that:non-play is most frequently associated with No verbalisation which ranges from 75% to 95% of the observation time. The amount of verbalisation ranges between 5% to 25% of the time across both children and kinds of verbalisation. Monologue ranges between 2.9% to 11.4%. The amount of Dialogue appears to be very little, ranging from 2.4% to 13.3%. Soliloquy is very infrequent and occurred only in two cases, at 0.1% and 0.3%.

Transition also shows little association with verbalisation, which is ranging between 8.8% and 29% of the observation time which falls into different categories of verbalisation. The amount of Dialogue varies between 2.1% and 14% across the target children. Soliloquy appears to be infrequent and occurred in only 3 cases.

Amongst the different types of play, Functional play episodes provided children with opportunity for verbal interaction between 15% and 58% of the observation time. Dialogue in this type of play is infrequent, with variations across the target children ranging between 4.8% and 21.1%. Soliloquy appears to be infrequent, but occurs in 7 children.

Constructive play provided children with opportunity

for verbalisation of all kinds, between 28% and 54% of the verbalisation time. The amount of Dialogue ranges between 10.8% and 45.6% of the verbalisation time. Soliloquy is infrequent but exist in all 8 children, ranging between 0.4% and 7.5% of the verbalisation time.

Dramatic play provided children with opportunity for verbalisation between 88.2% and 73% of the verbalisation time. Between 24% to 79% of the verbalisation occurred in form of Dialogue, and is the most frequent form of verbalisation in this type of play. Soliloquy exists in all cases, ranging between 1.3% to 46.9% of the verbalisation time.

Comparing play and non-play activities, it appears that verbalisation is more frequent during play activities. Amongst the different types of play there is a great deal of overlap between all types of play with regard to Monologue Dramatic play appears to have the highest rate of association with verbalisation, particularly Dialogue and Soliloquy. These results are consistent across all eight children, regardless of the variations in overall patterns relating to individual differences. No significant sex differences can be inferred.

CONCLUSIONS

A comparative analysis between different types of play activity in terms of social participation, verbalisation and complexity level reveals that different types of activity tend to provide children with different opportunities for social and verbal interaction which occur at different levels of complexity. It has been shown in the previous chapter that children's play behaviour could be differentiated along the lines of 'preferences' and 'time'. In this chapter it emerges that activity type can be differentiated and specified by the some characteristics.

In a rich stimulating environment such as nursery school in which there are a number of options open to children in terms of activity and play partner a child will prefer one or more to the others. The reasons for their individual choices are not known, but these preferences are an undeniable fact. Children do not see a play object as being limited to its prescribed function; it may be used in many ways, according to the perception of the individual. For example, a child may treat a piece of lego as if it was a dog which could walk and talk/bark. The function of Lego here is not Constructive but symbolic. Thus it is the function given by the child to an object or type of play activity rather than its 'canonical' or normative function which is important.

It can be inferred from the data that in a comparison between behaviour which comes under the non-play (No play and Transition) categories with that under the play categories (Functional, Constructive, Dramatic and Games) play appears to be superior to non-play activity across the range of the target children without exception, since in play activities children socialised and verbalised more. With regard to the complexity level, play activities fell automatically into one of the levels I-IV, whereas non-play activities fell into category 0. This is not to say that during non-play activity children learnt nothing, but these findings emphasise that, in terms of practice, children are offered better opportunities by play activities than by non-play activities.

In a comparison between different types of play activity in terms of social participation and verbalisation it emerges from the data that play activities can be put into an order of superiority. Dramatic play comes first, Constructive play next and Functional play is placed last. As is shown in the data, although the target children showed very little overt Dramatic play, when they did such play was associated with more Dialogue and Cooperative social behaviour. Constructive play together with Associative social participation yielded a good level of verbalisation, higher than Functional play and non-play, but not equal to

Dramatic play. Constructive play (see previous chapter) is the preferred form of play amongst the target children.

However, there seem to be some peculiarities about Constructive and Functional play in that in their cross-tabulations with verbalisation both activities showed some associations with Soliloquy. One may raise the question whether this kind of verbalisation is usually to be expected from a situation in which the child is engaged in imaginary play and sees it as necessary to talk to an imaginary partner/s. Moreover, in the cross-tabulations of the types of activities by social participation, in some cases Functional play was seen in association with Associative participation. Once again, if Functional play is the lowest cognitive form of play and group play or Associative play indicates the social maturity and social development of the child, the association of the two variables tends to be conflicting and is questionable. The suggestion that further investigation be made in this respect will come under consideration later in Chapters 7 and 8.

Regarding the level of complexity, one needs to be very careful in using this category system in conjunction with another category scheme to measure the cognitive complexity of play behaviour (i.e Smilansky's category system), or considering it as an appropriate measure for distinguishing

between the complexity of Dramatic and Constructive play in regard to the criteria which are based on play material. This may be due to a methodological problem here (which is discussed in Chapters 7 and 8). Furthermore there was a difficulty in obtaining reliability with this particular category which could only be improved through extensive practice. The cross-tabulation of complexity level by social participation and by verbalisation shows that the higher complexity levels are associated with Dialogue and social play (Associative and Cooperative).

The results of the comparative analysis in this chapter appear to be supportive of the ideas of Smith, Dansky, and Sylva, who suggested the significance of Dramatic play in the development of cognitive/social skills during the preschool period and emphasises the superiority of Dramatic play over the other types of play in terms of social and verbal interaction.

Qualitatively, Dialogue taking place during Dramatic play appears to be mainly based on the context of play, and a comparative analysis of the subcategories of Dramatic play shows that an advanced form of social participation and verbalisation occurs when children take on a 'role' either

behavioural or social.

The findings of this study are also indirectly supported by those of Pellegrini (1982) and of Rubin, Maioni and Hornung (1976). These studies, both of which used the 'nested scheme' of social and cognitive play categories, found Constructive play associated with Associative and Dramatic with Cooperative but the differences in those studies related to age differences (Pellegrini), and social class differences (Rubin et al).

The implications of these findings are both academic and practical. Academically, it suggest the possibility of prediction of certain behaviour characteristics of each type of play regardless of the material involved in play. If this is the case then, practically speaking, certain activities can be used purposefully for meeting the needs, learning and other, of the individual child. For example, play materials may be substituted/modified in Dramatic play for something else in order to provide an appropriate play type for a specific purpose. Respectively, children in need of social or verbal practice may consciously be persuaded to participate and take role in Dramatic play situations.

CHAPTER FIVE

The choice of play partner and the type of activity.

In this chapter I focus on the social aspect of the play environment. This is examined in relation to partner preference and to the relationship between play types and the play partners chosen. This variable has been reported in previous studies as playing a crucial role in children's play behaviour and, under various titles, has been attracting researchers from diverse fields of inquiry, including psychologists, educators, sociologists and anthropologists. A number of studies have examined the role of the 'play partner' from several points of view in regard to both the adult 'playmate' and the 'agemate'. The importance of various facets of the role of the adult has also been examined. These include: the adult establishing social play for young children (Crawley et al, 1978); direct adult intervention in the form of play tutoring (Smith and Syddall, 1978; Smith, Dalgleish & Herzmark, 1981); and the role of the adult in organising children's activities (Carpenter, 1979; Stein, Cofer & Susman, 1977).

chapter 5: Play partner and the type of activity.

A number of studies have focussed on the effect of the agemate in play situations. The evidence reported has been based on such variables as: the relative social position (Putallas & Gottman, 1981; see also Asher & Gottman, 1981; Rubin, 1980); the age of the play partner (Garvey, 1974); and the gender of the play partner (Jacklin & Maccoby, 1978).

Nevertheless there is relatively little evidence, if any, which shows the relationship between the types of play and the choice of play partner. In a nursery environment where there is potentially a wide choice of play partners, will the target child have a clearly preferred playmate? Should s/he do so, will this choice remain constant across different types of play or will s/he change the partner when moving from one type of play to another? To answer the question, the association between the types of play and the choice of play partner/s in each individual case is examined. Furthermore the consistency of the findings across the range of the target children will be discussed.

Method.

For the purpose of analysis the same body of data collected over a nine month span, has been used. Target

chapter 5: Play partner and the type of activity.

children (4 boys and 4 girls) were individually observed for 20 minutes per session on a 10-second interval basis for 50 sessions spread over a period of 9 months (see Chapter 2). As regards play partners the presence and identity of up to 3 partners was recorded (where there were any partners). If the number of children joined together in one activity exceeded 4 (the target child plus 3 play partners) priority was given to the predominant ones.

The following eight tables (Tables 68 to 75) show the cross tabulation between the types of play (Functional, Constructive and Dramatic) and the choice of play partners.

The list of partners has been rank ordered according to the overall total of observations. The figures in the cells represent the number of observations in relation to type of activity and the code number of playmate. The concept of the 'preferred partner' or intimate friend here is defined as those partners who were seen with the target child at least 10% of the time in any type of activity. This is shown by an asterisk, *. This should help visual assimilation of the data.

(Table 68)

The choice of the play partner and of the type of activity

Tabulation of the types of play by play partners.

gI

Order	Code no of Partner	Fun	Con	Dra	Total
1	3	18*	35*	64*	117*
2	15	14*	29*	70*	113*
3	8	0	9	64*	73
4	23	0	21*	50	71
5	10	0	21*	50	71
6	9	0	40*	23	63
7	20	9	10	40	59
8	17	16*	10	30	56
9	24	14*	9	31	54
10	16	6	0	4	46
11	6	0	0	44	44
12	21	9	0	30	39
13	13	20*	2	10	32
14	27	0	0	28	28
15	14	10	17	0	27
16	7	0	11	0	11
17	4	0	0	10	10
18	12	0	9	0	9
19	5	0	0	7	7
20	25	0	0	7	7
21	28	0	0	7	7
22	18	6	0	0	6
23	11	0	0	3	3
Total		122	214	572	953

* 10% or more of the column total.

(Table 69)

The choice of the play partner and of the type of activity

gII

Order	Code no of Partner	Fun	Con	Dra	Total
1	19	13	53*	69*	135*
2	23	14	90*	8	112*
3	13	21*	2	60*	83*
4	17	18*	40*	10	68
5	11	18*	0	43*	61
6	10	9	18	29	56
7	14	22*	2	30	54
8	21	0	7	41*	48
9	16	0	7	32	39
10	7	0	30	2	32
11	8	2	15	8	25
12	9	5	15	3	23
13	24	4	18	0	22
14	3	1	19	0	20
15	15	5	4	11	20
16	6	11	1	0	12
17	2	0	7	4	11
18	1	6	0	0	6
19	5	0	0	7	7
Total		122	214	572	953

* 10% or more of the column total.

(Table 70)

The choice of the play partner and of the type of activity

gIII

Order	Code no of Partner	Fun	Con	Dra	Total
1	5	24*	531*	554*	1115*
2	22	0	159*	121	280*
3	1	34*	148*	74	256
4	10	32*	170*	50	252
5	14	0	36	169*	205
6	9	0	42	136*	178
7	17	23*	69	32	124
8	20	0	37	44	81
9	15	0	41	32	73
10	19	0	12	39	51
11	7	0	18	23	41
12	18	8	10	21	39
13	4	39*	0	0	39
14	16	8	15	0	23
15	11	0	3	14	17
16	8	0	13	0	13
Total		168	1304	1309	2787**

* 10% or more of the column total.

** There were also 6 intervals recorded as game, omitted from Table.

(Table 71)

The choice of the play partner and of the type of activity

gIV

Order	Code no of Partner	Fun	Con	Dra	Total
1	14	19*	237*	331*	599*
2	3	8*	134*	209*	351*
3	17	8*	65	99	172
4	21	0	26	93	119
5	5	0	72	30	114
6	16	3	56	36	95
7	10	2	29	56	87
8	7	0	43	31	74
9	15	0	0	55	67
10	13	0	20	45	65
11	6	0	17	22	39
12	22	0	18	6	24
13	12	0	20	0	20
14	20	1	10	9	20
15	24	0	0	16	16
16	19	0	0	15	15
17	4	0	2	12	14
Total		41	749	1065	1891**

* 10% or more of the column total.

** There were also 36 intervals recorded as game, omitted from Table.

(Table 72)

The choice of the play partner and of the type of activity

bI

Order	Code no of Partner	Fun	Con	Dra	Total
1	9	49*	397*	301*	770*
2	17	59*	53	159*	271*
3	16	17	89	136*	249*
4	3	16	73	39	128
5	18	39*	36	40	115
6	15	35*	58	12	105
7	13	3	9	83	95
8	5	15	44	10	69
9	7	17	10	28	55
10	6	15	28	0	43
11	19	1	15	1	40
12	20	0	14	24	38
13	23	11	26	0	37
14	28	0	13	17	30
15	26	0	13	13	26
16	19	0	0	15	15
17	27	0	25	1	26
18	2	0	13	4	17
19	14	0	4	13	17
20	22	0	13	0	13
21	25	2	11	0	13
22	21	0	1	10	11
23	4	3	5	2	10
24	29	0	5	0	5
25	11	1	2	0	3
26	1	1	0	0	1
Total		284	975	893	2205

* 10% or more of the column total.

** There were also 53 intervals recorded as game, omitted from Table.

(Table 73)

The choice of the play partner and of the type of activity

bII

Order	Code no of Partner	Fun	Con	Dra	Total
1	8	68*	516*	317*	901*
2	3	9	88	40	137
3	18	4	70	50	124
4	13	31*	18	67*	116
5	7	9	22	56	87
6	28	6	68	2	76
7	10	9	54	0	63
8	21	0	43	13	56
9	6	5	16	23	44
10	5	4	12	20	36
11	28	4	28	4	36
12	11	3	27	3	33
13	16	2	6	24	32
14	17	4	20	0	24
15	15	1	1	18	20
16	4	3	3	10	16
17	23	0	14	0	14
18	20	1	10	0	11
19	26	0	4	6	10
20	1	7	0	0	7
21	14	4	0	0	4
22	12	0	3	0	3
Total		174	1023	653	1850

* 10% or more of the column total.

(Table 74)

The choice of the play partner and of the type of activity

bIII

Order	Code no of Partner	Fun	Con	Dra	Total
1	10	20*	204*	694*	918*
2	3	5	74*	452*	531*
3	17	0	47	450*	497*
4	20	14*	76*	538*	448*
5	8	23*	111*	172	306*
6	5	10*	6	106	122
7	14	5	52	11	68
8	13	0	0	30	30
9	7	1	3	21	25
10	23	0	0	20	20
11	21	0	0	6	6
12	18	0	0	5	5
Total		78	573	2325	2976

* 10% or more of the column total.

(Table 75)

The choice of the play partner and of the type of activity

bIV

Order	Code no of Partner	Fun	Con	Dra	Total
1	4	16*	180*	930*	1126*
2	1	0	72*	507*	579*
3	22	17*	63	241	321
4	5	19*	91	186	296
5	18	0	35	208	243
6	19	0	60	145	205
7	8	0	26	129	155
8	6	0	49	82	131
9	15	0	26	89	115
10	7	7*	25	69	101
11	21	0	20	64	84
12	23	0	10	71	81
13	9	0	6	69	75
14	25	0	0	45	45
15	2	0	20	23	43
16	24	0	0	38	38
17	20	0	24	7	31
18	10	5	14	9	28
19	17	0	0	28	28
20	13	9*	3	0	12
Total		73	724	2940	3737

* 10% or more of the column total.

DISCUSSION

gI

It can be seen that the target child played almost equally often with two children across the three types of play. However there are more preferred play partners each of which was involved in one or more types of play.

gII

Here there are clearly preferred partners one of which is consistent for both Constructive and Dramatic play; one is the preferred partner for only Constructive and the third one is the preferred partner for both Dramatic and Functional play. There are other partners preferred just for certain types of play.

gIII

There is a major difference between the first and the second preferred partner. The first preference is consistent for all three types of play; the second or alternative partner is the preferred one in only Constructive play. By the criterion there are other

chapter 5: Play partner and the type of activity.

preferred partners relating to single types of play.

gIV

There are two clearly preferred partners consistent across all three types of play. The difference between the first and the second preference is rather large. There are not any other preferences relating tosingle types of play.

bI

There are three preferred partners using the criterion. One is largely different from the other two regarding the total number of observations. The pattern of preference for the first partner appears to be consistent across all three types of play. The second one is preferred in both Functional and Dramatic play and the third one is the preferred only in Dramatic play. There are other preferred partners relating to the single types of play.

chapter 5: Play partner and the type of activity.

bII

Using the criterion in relation to the overall total number of observations there is only one clearly preferred play partner and this one is consistent across all three types of play. But there is one more partner who appeared predominantly with the target child during Dramatic and Functional play episodes.

bIII

There are five children who have been preferred most, one of whom is largely different from the other four regarding the total number of observations. He is also the most preferred one in all three types of play. The fourth play partner has also been the preferred one in all three types of play; the second preferred partner appears to be involved in both Constructive and Dramatic play, whereas the third preferred partner has been appreciably involved only in Dramatic play. There is also one further partner who has accompanied the target child in Functional play.

bIV

There are two play partners who have been preferred most, one of which is appreciably different from the other and is the consistently preferred one regardless of the type of activity; whereas the second one has been preferred in both Constructive and Dramatic play situations, there are also four further preferred partners relating to Functional play activity.

The total number of play partners chosen ranges between 12 and 26; the total number of observations in social activity ranges between 832 and 3737. In terms of the number of play partner changes boys show more fluctuation amongst themselves than do the girls. The range for the boys is from 12 to 26; the range for the girls is from 17 to 23. The overall total number of observations in the case of the boys ranges between 1830 and 3737; in the case of girls the range is between 832 and 2787.

Only one child had one preferred play partner, four of eight children had two preferred play partners, and two of the eight had three. One child preferred five partners.

Examining the total number of observations, those related to Functional play range between 41 and 284; for Constructive play the range is between 214 and 1304; for

Dramatic play the range is between 351 and 2940.

Do children play with the same partner in all types of play?

As can be seen from Tables 68 to 75 the target children appear to have one or two intimate friends with whom they play at all types of activity; but other partners become involved, or are preferred, in different type/s of play. This may become clearer if the eight tables (68 to 75) are summarised. The result is shown as Table 76.

chapter 5: Play partner and the type of activity.

Distribution of the play partners across the types of play

Table 76 demonstrates the distribution of the play partners accompanying the target children across different types of play.

(Table 76)

F	C	D	F/C	F/D	C/D	F/C/D	Tot
14	5	6	4	4	3	10	46

The results suggest that 10 children accompanied the target children in all types, the number of partners involved in combination of two types of play ranged from 3 to 4, relatively a greater number of children accompanied the target children in single types of play.

Further analysis

An observation day consisted of 60 observations and the criterion for selecting a 'preferred partner' was 10% of the total observations of each type of play during which a certain partner accompanied the target child. If the 10% criterion corresponded to 60 observations or less for those children who appeared with the target child have been a child who was a partner for only one actual episode of play, on one day. This possibility could be examined by calculating the mean duration of play episodes in each type of play for each individual subject. To examine the mean observations, a daily based analysis was employed for each individual case. Each session of observation (60 observations) was broken into episodes. Each episode showed the number of 10 second intervals the target child had taken part in a kind of activity. Then the mean number of observations for episodes of type of play activity were calculated, for each subject, and are shown in the following table (Table 77).

The mean number of observations

The following table shows the mean number of observations for episodes of each type of play activity in individual children

(Table 77)

	Fun	Con	Dra
gI	2.5	8.9	7.5
gII	3.0	8.6	7.9
gIII	5.1	20.9	28.1
gIV	3.7	14.6	16.7
bI	3.3	6.9	7.0
bII	5.0	6.6	6.4
bIII	3.3	15.5	30.3
bIV	4.3	10.8	19.2

chapter 5: Play partner and the type of activity.

It can be seen from the table that mean observations corresponding to each type of play activity and across the target target children are less than the number of observations calculated by the criterion.These calculations suggest that the 10% criterion which is considered to select the preferred play partner(s) covers those partners who accompanied the target child in more than one episode of play, nevertheless, since the number of observations in episodes were often less than ten, results need to be treated with some caution.

Relative age of preferred partners to the target children.

The age of the play partner was another factor which seemed to be important. It could be the case that children choose younger playmates for Functional activities, but for Constructive or Dramatic activities they choose older ones. The hypothesis in this respect was Functional ‹Constructive ‹Dramatic. The ages of the preferred partners were calculated and are shown in Table 78.

TABLE 78

Relative age of the play partner to the target children

Target Child d.o.b	Fun	Con	Dra	Fun/Con	Fun/Dra	Con/Dra	Fun/Con/Dra
gI 07.01.77	(+2.0m) (-10.5m) (-9.0m)	(-10.5m) (-9.5m) (-1.1m)					(-10.5m) (-6.5m)
gII 10.04.77	(-6.5m)	(6.5m)		(+6.0m)	(+9.5m) (+9.5m)	(+4.0m)	
gIII 07.01.78	(-2.0m) (-3.5m)	(-8.0m)	(+2.5m) (+7.0m)	(+7.5m) (+5.5m)			(-2.5m)
gIV 19.01.78	(1.5m)						(+2.0m) (-2.0m)
bI 02.05.77	(+7.0m) (+8.0m)				(+7.0m)		(+3.0m)
bII 04.02.77					(+14.0m)		(-3.0m)
bIII 30.07.78	(-1.5m)		(+12.0m)	(+14.0m)		(+1.5m)	(+1.5m) (+4.5m)
bIV 17.03.78	(-1.0m) (-4.0m) (-6.0m) (-3.0m)					(+6.5m)	(-4.0m)
Mean	-2.25m	-7.12m	-6.67m				

Note: (+) older playmate/s
(-) younger playmate/s

chapter 5: Play partner and the type of activity.

Results

The results suggest differences in the pattern of friendship among the target children.

gI

This child had established her friendship with younger preschoolers across the activities. Both clearly preferred partners were younger than herself; three further partners, involved only in Constructive play sequences, were also younger; of the three partners involved with her during Functional play episodes, only one of them was older - by two months.

gII

This child had played with younger children in Functional play as well as in Constructive play and with older children in a combination of activities such as: Functional/Constructive, Functional/Dramatic and Constructive/Dramatic. She had no single clearly preferred partner.

gIII

This child has established her friendship with a younger partner. She also played with younger ones in Constructive play as well as Functional play but played with older children when she played Dramatic and Functional/Constructive play.

gIV

This child played with a younger and an older partner across all three types of play and with a younger one in Functional play situations.

bI

This child always played with older children as preferred partners

bII

This child played most often in all types of play with

a younger boy; when involved in Dramatic play he had an older partner.

bIII

This child preferred to play with a younger partner in Functional play and with older in Dramatic, Functional, Constructive and Constructive/Dramatic play. His most preferred play partners were both older than himself.

bIV

This child had a younger intimate play partner; played with an older one in Constructive/Dramatic play and with four younger ones in Functional play.

Overallresults suggest that the target children have shown an age preference. Their preference appears to be for younger playmates in Constructive play, and older for Dramatic play, while in terms of Functional there is some overlap. To test for significance the Mann Whitney U test was used. The results are shown in Table 78.

Test of significance

The following table represent the result of the Mann Whitney test of significance on age of the preferred play partner and the type of activity.

(Table 78)$_A$

	Observed U	Mann whitney u
Fun vs. Con	6	p<.5
Con vs. Dra	37.5	p>.5
Dra vs. Fun	15	p>.5

As the results revealed, there is one significant result: the target children were accompanied by slightly younger children in Functional play, but by appreciably younger children in Constructive play. In terms of Functional vs. Dramatic and Constructive vs. Dramatic no significant age differences with respect to the preferred

play partners could be inferred. Mean differences of age in each type of play indicate that older partners were chosen for Dramatic play, but the small number of such partners(three) prevents any significance level being attained.

CONCLUSION

Examination of different types of play experienced by the target children and their choice of partners reveals that children appear to choose one close friend and play with him/her across the different categories of play. However, in most cases more than one play partner is involved. Also, it is seen that certain partners are preferred in certain types of play. The latter may reflect the play preference. In other words, when the given activity is in progress those children who are interested in this particular activity may come and participate. Where there is more than one partner, as in more than 10% of the overall number of observations, it may be the case that the target child has a main friend with whom s/he plays regardless of the type of play, but that in his/her absence the child will play with an 'alternative' friend. From the analysis up to this stage, it is not quite clear whether

close friendship or intimacy forms between more than two children. I use the word 'friendship' to describe the relationship between children in the play situation. However, the concept of friendship changes through the various stages of the life span. When considering young children in a nursery school the word may be applied to those who participate in the same activity. The more that particular children are seen together, it is assumed the greater is the intimacy. We do not know whether they start their friendship first and then begin to play, or they establish their friendship during the process of play. It was stated by the teacher that bI and bII were close friends; so were bIII and B10; however, bII was reluctant to mix with other children if bI was away from the nursery; whereas bIII and bII managed to play with other children happily regardless of the presence or absence of their intimate friends. This may referred to individual differences. However, in both cases the data shows that bII and b10 were the most preferred play partners. In each case the daily reports provided by the parents of the target children were inspected. This shows that in both cases (bI and bII; bIII and b10), the children had ample opportunity to play and be together outside the nursery environment. Parents also helped the situation by arranging a number of meetings, visits and social gatherings amongst themselves as

well as for the children.

It may be suggested that children give priority to first establishing their friendship and then start playing. A further four subjects who were not restricted in choice of play partner/s by parental attitude (from the play profile of the children we learnt that some parents believed that playing with other children of the same age was 'not educational', or 'there are not many good children around'), and were able to play with their age mate/s either from the neighbourhood or among relatives. We do not have the evidence here to analyse how these children first established their friendship/intimacy. But it is also the case that a child may initiate one sort of activity, suggesting, for example, 'Come on, let's chase someone', or 'Let's play with the sand', or Let's build a mouse house'. The close friend/s under these circumstances would agree - 'yes, let's go' - and also those who happened to be interested in the given activity or in the chosen material may come and ask if they could play. The answer sometimes is 'no you are not our friend' and sometimes is 'yes'. Sometimes, later on and gradually, one by one, the children may leave the play scene; the 'leader' who initiated the activity in the first place may withdraw at any stage with or without his or her close friend/s.

In the two cases referred to above, where there was a

negative parental attitude (see play profile Chapter 3) towards playing with age mates at home these target children did not appear to have been influenced a great deal up to this age, as neither gII nor bIV appeared to be different from other children in this respect. However, gII can be described as the least sociable child amongst the target children, but as she did not appear to follow a pattern this lack of sociability cannot directly be attributable to parental attitude. bIV, on the other hand, was the most sociable of the target children while his parents' attitude was still against his playing with his age mates.

In regard to the overall total of time observations the differences between the most preferred play partner and the next preferred one in most cases is remarkably high. In the case of the child who was described by his mother as being 'peer group oriented', this subject had preferred four partners.

The focus remains mainly on the phenomenon of the 'close friend play partner' who is involved in all types of play. No sex differences can be inferred from the quantitative data, taking all play partners into consideration, but most preferred play partners are of the same sex. Also it is seen from the children's report that those children who had the opportunity of having an age mate to stay overnight were visited by children of the same sex.

This could in fact reflect parents' attitude rather than the sex preferences amongst the target children.

The statistical analysis of the mean observations supports the use of the 10% criterion (Tables 68 to 75), in that those 'preferred partners' in different types of play happened to be accompanied by the target children in more than one play episode. Nevertheless, since the number of observations in some cases, particularly in Constructive and Dramatic play episodes lasted 60 observations, the interpretation of the results need some degree of cautiousness.

Regarding the age of the preferred partners in each type of play, the target children chose relatively older ones for Dramatic play whereas they preferred Constructive and Functional play with younger ones. The findings in this respect however underline a need for further investigation. There also appear to be problems both methodologically and categorically. For instance, if we consider those older preferred partners accompanied in Functional/Constructive: methodologically, the observer might have underestimated the Dramatic play episodes and confused them with Functional play episodes. Categorically, Constructive play might not have been an intermediate stage between Functional and Dramatic play in the developmental stages. Both issues will be examined later in this thesis.

chapter 5: Play partner and the type of activity.

The practical application of the findings seems to be that the pattern and implications of a child's close friendship(s) may be important when encouraging a child towards a certain type of activity. Academically, these findings also suggest the need for further research relating to whether children establish their friendship(s) prior to their play or build their friendship up through the process of play. The present study supports either hypothesis equally well.

CHAPTER SIX

Developmental changes in play behaviour.

The emergence of play and its developmental change is certainly not a new question and has received attention since the 1900's. In a number of studies psychologists and educators have concerned themselves with distinguishing the different forms of play and their relationships with age during the course of development in childhood.

In this respect the development of play behaviour has been looked at from a variety of view points: these being the cognitive forms, social forms, and developmental changes in dramatic play. For each form of play categories have been devised, generated and widely used (H. Spencer, 1872; Groos, 1901; Parten, 1932; Isaacs, 1933; Buhler, 1935; Valentine, 1942; Piaget, 1951; Smilansky, 1968; Kalverboer, 1974). Recent studies under the three aforementioned headings will be discussed in turn, since changes in these forms of play (cognitive play, social play and changes in Dramatic play) has been the main area of iterest in the present research.

The cognitive form of play and developmental changes.

The problem of categorisation of different forms of play in this respect was addressed by certain nineteenth century British psychologists. Herbert Spencer (1872) was one of the earliest psychologists who distinguished between different forms of play. There followed a series of studies which concentrated on object play and documented the developmental changes in play (Groos, 1901; Buhler, 1935; Piaget, 1951; Smilansky, 1968). Amongst these studies the number of reports which were based on longitudinal data would seem to be limited to the work of two psychologists; the first being Buhler (1935), followed twenty years later by Piaget (1951) who, using Buhler's classification, studied his own children. In these studies different forms of play are introduced as existing in parallel with different levels of cognitive development during childhood.

The most recent category system is that devised by Smilansky (1968). In her influential book, 'The role of socio-dramatic play in disadvantaged children', based on her investigations in Israel, she proposed a category system consisting of "four general stages in play through which a normal child moves 'naturally' graduating from one stage to the next in keeping with his biological development, from functional, to constructive, to dramatic and finally to games with rules". It is emphasised that the progression is

linear.

However, other studies have put forward evidence that the emergence of symbolic play and games play appears to happen during early infancy (Goldman & Ross, 1978; Fein, 1979; Nicholich, 1979). Furthermore it is reported that an earlier form of symbolic activity is tied to the concrete environment and emerges soon after the first year of life (Grower, 1978).

In terms of the constructive type of play activities there appear to be contradictory reports. On the one hand it has been suggested that constructional play emerges after the age of four-and-a-half years (Buhler, 1935) and after symbolic activity or possibly in parallel with symbolic activity or games (Piaget, 1951). On the other hand, Smilansky has suggested her classification in which this type of play appears to emerge after functional play and before symbolic activity.

The most recent studies, regarding the development of constructive play and also its relationships with functional play at one end and dramatic play at the other end appear to suggest an ambiguous picture. However, they do not clearly define constructive play as an intermediate stage between the two types (functional and dramatic) of play. For example, the two studies by Rubin, Watson and Jumbor (1978) and Pellegrini (1982) found that the decrease in functional

play episodes was in parallel with an increase in dramatic play over the pre-school age range. A similar report was put forward by Rubin and Krasnor (1980), based on longitudinal data. A further report with results contradictory to those of Smilansky's was published by Rubin and Maioni (1975). In this study there were no significant relationships between the frequency of occurrences of functional play with those of constructive and dramatic play behaviour.

Games with rules which is considered to be the final stage in play development, is reported to be rare during pre-school age range, it needs adult intervention and is no longer a spontaneous activity (Rubin, Maioni, 1975; Pellegrini, 1980; see also chapter 3 in this thesis). Krasnor and Pepler (1980) emphasise that the emergence of games with rules implies the understanding of pre-set rules; however, "evidence of the early emergence of games behaviour does not necessarily negate the proposed hierarchy because these early forms appear qualitatively different than later forms" (Krasnor & Pepler, 1980).

Despite numerous studies in which this classification system has been used the hierarchical validity of it has in fact received little attention and has remained unexplored. This classification system, however, has been employed in this study in order to look at the developmental changes in

the cognitive form of play during the course of the study.

Social play and developmental changes.

The social components of play have been investigated by psychologists and various forms have been distinguished. One of the best known and most popular classification systems stems from Parten's classic study (1932) on age differences in interactive behaviours. She demonstrated that social participation in childhood correlates with age. According to her, three-year-old children, regardless of their social environments, engage mainly in solitary play (that is, play by themselves when with others), whereas four-year-olds mainly play in 'parallel' (that is, playing side-by-side with another child with no interaction between them). Five-year-olds, she found, tend to take part in group play (associative or cooperative). A number of studies looking into children's social play made use of this category scheme (Rubin et al, 1976; Smith, 1978; Johnson & Ershler, 1981; Pellegrini, 1981, 1983 amongst others).

This social hierarchy scheme has been used as an index of social development by both psychologists and educators (Hendrick, 1975; Tizard, philps & Plewis, 1976; Sponseller & Jaworski, 1979).

However, a second series of reports cast doubt upon the strict validity of the idea that the social play categories as proposed by Parten (1932) are necessarily hierarchic in

terms of age and sophistication. Longitudinal and factor analytical studies have documented that parallel play is not necessarily a mediatory stage between solitary and social play in developmental changes (Smith, 1978; Roper & Hinde, 1978). Moreover, evidence has been put forward that solitary play does not necessarily result from lack of ability to socialise but may occur from personal preference (Rubin, 1977) or it may be dictated by the nature of the activity. In chapter 4 it was shown that the social participation of children in the nursery environment correlates with the cognitive form of play (functional, constructive, dramatic). These more recent studies, therefore, argue against the validity of the assumption about sequencing of the social play category scheme suggested by Parten.

Many recent studies, following Rubin et al (1976) look at play from two aspects - social and cognitive - simultaneously. Thus we have a combinatorial category system (Parten's and Smilansky's) which provides a more powerful measurement for studying children's play behaviour. This 'nested scheme' has been widely used in a number of studies concerning age, sex and social class differences in children's play (Rubin, Maioni & Hornung, 1976; Johnson & Ershler, 1981; Rubin, 1982; Pellegrini, 1982,1983).

Pellegrini (1982) investigated age differences in

cognitive/social play. 30 pre-schoolers, aged 2,3 and 4 (10 of each age group) contributed for 15 sessions over a period of four weeks by a time sampling schedule. The results suggested a correlation between age and social participation. However, he also reported that three-year-olds engaged in more non-social dramatic play than younger ones (two year olds). In regard to sex differences, according to Pellegrini, 3 and 4 year old girls engaged in non-social functional play; whereas boys of the same age predominantly engaged in non-social dramatic play.

Prior to this study, Johnson and Ershler (1981) had examined the development of social/cognitive play of preschoolers. The analysis in this study was based on longitudinal data in which two groups of children (aged 3-4) from two different classes were involved in a directive education programme (15 children: 7 boys, 8 girls); and in a non-directive/discovery learning programme (11 children: 6 boys and 9 girls). The results suggested that across time and the two classes, dramatic play increased while constructive play decreased; constructive play was confirmed to be the predominant type of play in the pre-school setting (see also chapter 3 in this study). He also showed that interactive play was more common than parallel play. In regard to the relationship between the two aspects of play (cognitive and social), the study suggested that the level

of maturity of the social component was related to the level of maturity of the cognitive play. In other words, 'pretend' play was associated with the most mature form of socialisation. These findings are consistent with the findings documented by previous studies and also the findings of this study as presented in chapter 5. Supportive findings are both cross-sectional and longitudinal (Rubin et al, 1978; Golomb, 1979; Hetherington, Cox & Cox, 1979; Rubin & Krasnor, 1980).

As can be seen from the studies in this field there is a lack of consistency across and sometimes even within one study when a certain set of data is manipulated in different ways. For example, when in one study the social component of play was examined the result suggested an overall correlation between age and social participation. Giving different treatment to the same set of data, the result revealed, nevertheless, that three-year-old boys engaged in more non-social dramatic play and the girls in more non social functional play relative to the two year olds (Pellegrini, 1982). Thus some detailed findings conflict with the linear pattern and hierarchical progression approach. It would appear that the subject of developmental changes is in need of further attention in the light of the above contradictions.

Dramatic play and developmental changes

It is suggested (Fein, 1979) that the emergence of pretend play occurs around the first year of life. But the form of this behaviour changes over the course of development. A number of psychologists have proposed sequential stages by which the trend in the developmental changes are shown (Matthews,1977; Watson & Fischer, 1980).

The initial stage of this activity, it is suggested, is based on the concrete environment. Progression is described as hierarchical - from simple pretend use of objects and using self as an agent in 'as if' manner in the first year, to the stage at which the child becomes socially competent in the awareness of social roles; this, according to Piaget (1928), is a relatively late development (7-8 years). When classifying behaviour of this kind the general view is that the emergence and the characteristics of the different forms are as follows.

By the middle of the second year of life, the child uses an object in an 'as if' manner (for example, 'drinking milk' from an empty bottle indicating child's own thirst). Towards the end of this year the child manages to use two objects simultaneously (for example, 'feeding' a doll) (Fein, 1979). During the third year, s/he substitutes objects in a non-literal fashion (e.g. a block of wood is a doll) (Huttenlocher & Higgins, 1978). Pretend play which

has a planned element, and object substitution increases towards the third year (Fein, 1979). The nature of symbolic transformation changes in that behaviour at this stage becomes more and more detached from 'real' life. For example, the activities of feeding and drinking are no longer associated only with the child's own actual hunger or thirst. The child acts out feeding him/herself at times other than 'meal-time' (self agent). This stage of 'decontextualisation' inevitably involves an object. This may be characterised in play behaviour as when a child uses an inanimate but realistic object in the activity, for example, 'feeding' a doll (active other agent). The next stage is the substitution of an inanimate and unrealistic object for the realistic object. For example, the child selects a piece of lego, and pretending it is a doll/baby, feeds it (active substitute agents).

The child then moves to the stage of 'collective symbolisation'; this is the stage during which s/he distinguishes between different roles (e.g. the mummy and the doctor) and 'themes'. S/he may take one role (behavioural role) or more than one (social role) depending on play circomstances. These stages, it is suggested, are hierarchic (Watson & Fischer, 1977, 1980; Fein, 1979).

Watson and Fischer proposed a sequential category system consisting of 8 steps by which the developmental

changes concerning dramatic/fantasy play were shown. This sequential category system is suggested as correlating with age. Thus the researchers sought to show that children move from 'self agent' to 'active other agent' to 'active substitute agent' to 'behavioural role' and to 'social role' (which embraces 3 stages, depending on number of roles taken). Using this category scheme, 'self agent' is predicted to occur as a parallel development to that of sensory motor activity. The stage of 'decontextualisation' consisting of 'active other agent' and 'active substitute agent' and 'behavioural role' is predicted to occur during the single representational stage. 'Social role' taking (one role or intersection of several roles) emerges during the period of representational mappings. According to Watson and Fischer children by the age of five should have the ability to 'role play'.

A recent study on the pattern of developmental changes in dramatic play of children of 2 to 6 years suggests that material fantasy play follows a curviliniar trend, whereas ideational fantasy follows a linear trend in terms of frequency and a curvilinear trend in terms of duration (Cole and Lavoie, 1985).

chapter 6: Developmental Changes

The aim of this chapter

The aim of this chapter is to examine the developmental trends in cognitive play, social play and dramatic play. Although previous studies have taken account of this, yet there is a relative lack of longitudinal evidence. The major difference between this study and previous ones is that in this study the nature of the data enables us to examine the same data set in various ways. This inevitably will provide different insights. The policy of analysing the behaviour of the same children from different aspects may provide the basic data needed to look at some of the problems which exist when studying the play behaviour of children.

A second major difference between this study and previous ones is the duration of observation per session. Previous observational studies typically observed children's free play activity for short durations (1-5 minutes) and are mainly cross-sectional. One is led to the conclusion that the observer may well be limited by the circumstances. For example, the criteria by which the researcher distinguishes dramatic play from constructive play relies on either spontaneous vocalisation or gesture. However, the child may start a period of play by constructional toy and move after a while into dramatic play. But as the period of observation is so short these developments are necessarily

missed. In this study care was taken to observe individual children for periods long enough (20 minutes) to minimise such omissions.

Method

The same sets of data based on the behaviour of the same children during the nursery hours as previously discussed were used. These were 24,000 data entries based on 8 subjects (4 girls and 4 boys), each of whom had contributed 3000 data entries (see also method, chapter 2). Each individual data set was divided into 5 time points, each of which represented 600 data entries or 10 days observation. The developmental changes were examined across the time points using the categories of cognitive play, categories borrowed from Smilansky; social play, category borrowed from Parten; dramatic play, category borrowed from Watson and Fischer (only the first five steps were decided to be appropriate).

The developmental changes in cognitive forms of play, social forms of play and dramatic play behaviour have been examined on both the individual and overall basis. Each will be discussed in turn. The first 9 graphs present the developmental changes in cognitive form of play on the individual and overall basis (Tables 79 to 87).

(Table 79)

Developmental changes in Activities

Tabulation of activities by time points (overall result)

Figures represent the mean frequency of occurrences of Types of Activities (calculated for eight children) during each time period/time point

	1	2	3	4	5
No Play	203.9	209.9	161.9	162.5	113.5
Transition	27.6	27.4	26.9	33.1	27.5
Functional	53	70.6	37.8	27.9	18.9
Constructive	177	149.1	194.6	216.5	191.3
Fantasy/Dramatic	123.5	143	177.9	156.5	228.9

(Table 80)

Tabulation of activities by time points

gI	Count Total %	1	2	3	4	5	Row Total
No play		225 7.5	244 8.1	223 7.4	237 7.9	129 4.3	1058
Trans		48 1.6	28 0.9	61 2.0	89 3.0	69 2.3	295
Functional		66 2.2	108 3.6	88 2.9	73 2.4	25 0.8	360
Constructive		128 4.3	127 4.2	224 7.5	185 6.2	305 10.2	969
Fantasy		133 4.4	93 3.1	4 0.1	16 0.5	72 2.4	318
Total		600	600	600	600	600	3000

(Table 81)

gII	Count Total %	1	2	3	4	5	Row Total
No play		261 8.7	362 12.1	238 7.9	288 9.6	272 9.1	1421
Trans		9 0.3	13 0.4	28 0.9	24 0.8	20 0.7	94
Functional		39 1.3	64 2.1	48 1.6	19 0.6	42 1.4	212
Constructive		129 4.3	153 5.1	195 6.5	264 8.8	224 7.5	965
Fantasy		78 2.6	8 0.3	91 3.0	5 0.2	42 1.4	224
Total		600	600	600	600	600	3000

84 scored as Games (omitted from Table).

(Table 82)

Tabulation of activities by time points

gIII	Count Total %	1	2	3	4	5	Row Total
No play		120 4.0	170 5.7	120 4.0	125 4.2	83 2.8	618
Trans		19 0.6	9 0.3	17 0.6	11 0.4	14 0.5	70
Functional		61 2.0	32 1.1	17 0.6	10 0.3	3 0.1	123
Constructive		325 10.8	319 10.6	192 6.4	265 8.8	144 4.8	1245
Fantasy		69 2.3	70 2.3	254 8.5	189 6.3	356 11.9	938
Total		600	600	600	600	600	3000

6 scored as Games (omitted from Table).

(Table 83)

gIV	Count Total %	1	2	3	4	5	Row Total
No play		272 9.1	178 5.9	207 6.9	163 5.4	113 3.8	933
Trans		28 0.9	23 0.8	20 0.7	24 0.8	13 0.4	108
Functional		40 1.3	56 1.9	29 1.0	18 0.6	22 0.7	165
Constructive		150 5.0	168 5.6	185 6.2	255 8.5	173 5.8	931
Fantasy		110 3.7	175 5.8	159 5.3	128 4.3	279 9.3	851
Total		600	600	600	600	600	3000

12 scored as Games (omitted from Table).

(Table 84)

Tabulation of activities by time points

bI	Count Total %	1	2	3	4	5	Row Total
No play		314 10.5	230 7.7	210 7.0	118 3.9	105 3.5	977
Trans		19 0.6	38 1.3	23 0.8	34 1.1	42 1.4	156
Functional		90 3.0	153 5.1	60 2.0	44 1.5	48 1.6	395
Constructive		74 2.5	79 2.6	241 8.0	261 8.7	276 9.2	931
Fantasy		103 3.4	100 3.3	66 2.2	143 4.8	129 4.3	541
Total		600	600	600	600	600	3000

(Table 85)

bII	Count Total %	1	2	3	4	5	Row Total
No play		180 6.0	249 8.3	202 6.6	210 7.0	225 7.5	1066
Trans		36 1.2	42 1.4	31 1.0	43 1.4	22 0.7	174
Functional		28 0.9	120 4.0	21 0.7	49 1.6	6 0.2	224
Constructive		136 4.5	95 3.2	249 8.3	213 7.1	179 6.0	872
Fantasy		190 6.3	94 3.1	97 3.2	85 2.8	168 5.6	634
Total		600	600	600	600	600	3000

30 scored as Games (omitted from Table).

(Table 86)

Tabulation of activities by time points

bIII	Count Total %	1	2	3	4	5	Row Total
No play		119 4.0	196 6.5	61 2.0	92 3.1	107 3.6	575
Trans		28 0.9	50 1.7	26 0.9	14 0.5	18 0.6	136
Functional		47 1.6	23 0.8	34 1.1	11 0.4	5 0.2	120
Constructive		154 5.1	93 3.1	166 5.5	162 5.4	139 4.6	714
Fantasy		252 8.4	238 7.9	313 10.4	321 10.7	331 11.0	1455
Total		600	600	600	600	600	3000

(Table 87)

bIV	Count Total %	1	2	3	4	5	Row Total
No play		140 4.7	50 1.7	34 1.1	67 2.2	34 1.1	323
Trans		34 1.1	16 0.5	9 0.3	26 0.9	22 0.7	107
Functional		53 1.8	9 0.3	13 0.4	15 0.5	0 0.0	90
Constructive		320 10.7	159 5.3	105 3.5	127 4.2	90 3.0	801
Fantasy		53 1.8	366 12.2	439 14.6	365 12.2	454 15.1	1677
Total		600	600	600	600	600	3000

chapter 6: Developmental Changes

Overall pattern in the developmental changes in cognitive play

Discussion

As the data suggests: the incidence of the category of non play activities (No play + Transition) showed a slight decrease from session I to session II; this is followed by a sharp decrease towards session III; it peaked towards session IV and decreased again during session V. There was a decrease over session V relative to session I in regard to non play activities.

Functional play: peaked towards session II and decreased towards session III, IV and V.

Constructive play: decreased during session II; recovered towards session III and IV; decreased towards the last session. A comparison between the two sessions (session I & V) indicates that the subjects engaged in more constructive play during session V than during session I.

Dramatic play: there was an increase from session I to session II and to session III. There was a drop towards session IV; this recovered fairly sharply during the last session. There were more dramatic play episodes over the period of session V.

The overall pattern suggests that children took part in either 'constructive' or 'dramatic' play activities.

chapter 6: Developmental Changes

Decreases in constructive play intervals appear to be associated with increases in dramatic play with the exception of session III where both constructive and dramatic play episodes had increased at the expense of non play activities. Both constructive and non play intervals had increases accompanied with a decrease in dramatic play. However, both constructive and dramatic increased towards the last period relative to the first; whereas non play and functional play intervals decreased.

A clearer developmental picture emerges when the mean frequencies of each type of activity for the first two sessions of the nine months period (I & II) are contrasted with the mean frequencies of the last two sessions (IV & V). This is shown in Table 88.

chapter 6: Developmental Changes

Table 88 shows the summary of the changes in each type of play activity during the course of observation. The figures are headed by play classification: in the first column the 'mean frequency' of the activities which ocurred during the first two time points(I and II); the second column shows the 'mean frequency' of the activities which occurred during the last two time points(III and IV).

TABLE 88

	Functional play		Constructive play		Dramatic play	
Sessions	I & II	IV & V	I & II	IV & V	I & II	IV & V
Subjects						
bI	121.5	46	76.5	268.5	101.5	136
bII	74	27.5	115.5	196	142	126.5
bIII	35	8	123.5	150.5	371	326
bIV	31	7.5	239.5	108.5	209.5	183
gI	87	49	127.5	235	113	44
gII	51.5	30.5	141	144	48	23.5
gIII	46.5	6.5	322	204.5	69.5	272.5
gIV	48	20	159	214	142.5	203.5

Results

According to the Table:

Functional play shows significant changes at the 5% level by the sign test, since 8/8 children have shown a decrease in frequency occurrence of Functional play over the last two time points; Constructive and Dramatic play do not show any significant changes during the course of observation.

The results suggest the following development:

Functional play

This category shows a consistent decrease in occurrence as the children have grown older. However, this type of play still exists. This is true of all the children, both boys and girls, in this study. The result is significant by sign test.

Constructive play

According to the table there is an increase in this type of play for 6 of the 8 children during the last two sessions, while for two of them there was a decrease in incidence.

Dramatic play

For 3 of the 8 children there was an increase in this type of play behaviour in contrast with the remaining 5 subjects. The major variations in regard to developmental changes in this study occurred under the headings of constructive and dramatic play. Looking at the mean

frequency of both these types of activity the data suggests that: for 2 children (out of 8) there was no increase of participation in both constructive and dramatic play activity; for one child there was a decrease in both constructive and dramatic play activities; for 4 out of 8 children there was an increase in constructive play activity which contrasts with the changes observed in the dramatic type of play behaviour. Only in the case of one child was there a decrease in constructive type of play which contrasts with the changes observed in the dramatic play episodes.

The findings of this study therefore do not appear to offer support to the hierarchical system suggested by Smilansky. In fact in this study there is no evidence to suggest that constructive play is a stage preceding the emergence of dramatic, or symbolic play. In fact, in so far as there is a pattern of stage development it is suggested that constructive play may well follow dramatic play, or the two types of play emerge parallel to each other. This contrasts with Smilansky's suggestion.

As has been shown 4 out of 8 children exhibited a higher incidence of constructive play episodes during the last two sessions and a lower incidence of dramatic play episodes.

I used a number of methods to check the validity of

this conclusion. Firstly, I focussed on the structure of the nursery environment to see if there were any fundamental changes during the period of study, such as reorganisation of furniture and toys, thus altering spaces and juxtapositions etc. I concluded that there had been no significant change in emphasis. Thus no particular type of play was encouraged more at one time than another. Such small changes as there had been could not have affected the balance of attraction or opportunity.

Secondly, I analysed the data on a daily basis (an example is given in Appendix c). No significant pattern or correlation emerged from using this time scale. It was noted that on a given day a child may not have shown play under one or other of the classifications but this was not seen as significant but based on subjective preference without correlation with any observable factor.

A further three methodological factors seemed to be crucial:

a) The significance of the time points upon which the developmental changes were examined.

b) The validity of the classification used (as suggested by Smilansky).

c) The reliability of the method of observation.

These factors will be the subject of the next two chapters (chapter 7 & 8).

DEVELOPMENTAL CHANGES IN SOCIAL PLAY

The next 9 Tables represent the developmental changes in social play, for both individual subjects, and overall for all subjects, data continued (Tables 89 to 97).

(Table 89)

Developmental changes in social participation

Tabulation of social participation by time points (overall result)

Figures represent the mean frequency of occurrences of Social participation (calculated for eight children) during each time period/time point

	1	2	3	4	5
Unoccupied	13	10.6	5	8.3	8.9
Onlooker	72	73.3	60.1	72.3	63.5
Solitary	121.3	120.4	115.3	102.3	135.8
Parallel	78.8	54.6	35.4	37.5	52.2
Associative	183.3	204.1	203.1	181	129.3
Cooperative	130.9	137	198	197.9	210.6

(Table 90)

Tabulation of social participation by time points

gI	Count Total %	1	2	3	4	5	Row Total
Unocc		42 1.4	20 0.7	25 0.8	43 1.4	38 1.3	168
Onlooker		60 2.0	35 1.2	56 1.9	132 4.4	80 2.7	363
Solitary		138 4.6	96 3.2	160 5.3	166 5.5	128 4.3	688
Parallel		135 4.5	76 2.5	25 0.8	89 3.0	176 5.8	500
Associative		128 4.3	268 8.9	247 8.2	146 4.9	69 2.3	858
Cooperative		97 3.2	105 3.5	87 2.9	24 0.8	110 3.7	423
Total		600	600	600	600	600	3000

(Table 91)

gII	Count Total %	1	2	3	4	5	Row Total
Unocc		6 0.2	31 1.0	0 0.0	20 0.7	14 0.5	71
Onlooker		88 2.9	191 6.4	92 3.1	136 4.5	132 4.4	639
Solitary		89 3.0	60 2.0	163 5.4	101 3.4	154 5.1	567
Parallel		110 3.7	109 3.6	50 1.7	72 2.4	57 1.9	398
Associative		172 5.7	170 5.7	227 7.6	221 7.4	159 5.3	949
Cooperative		135 4.5	39 1.3	68 2.3	50 1.7	84 2.8	376
Total		600	600	600	600	600	3000

(Table 92)

Tabulation of social participation by time points

gIII	Count Total %	1	2	3	4	5	Row Total
Unocc		2 0.1	0 0.0	2 0.1	3 0.1	0 0.0	7
Onlooker		19 0.6	14 0.5	12 0.4	6 0.2	23 0.8	74
Solitary		113 3.8	154 5.1	88 2.9	49 1.6	125 4.2	529
Parallel		44 1.5	80 2.7	29 1.0	0 0.0	0 0.0	153
Associative		273 9.1	259 8.6	248 8.3	193 6.4	141 4.7	1114
Cooperative		149 5.0	93 3.1	221 7.4	349 11.6	311 10.4	1123
Total		600	600	600	600	600	3000

(Table 93)

gIV	Count Total %	1	2	3	4	5	Row Total
Unocc		15 0.5	15 0.5	6 0.2	0 0.0	6 0.2	42
Onlooker		126 4.2	33 1.1	11 0.4	53 1.8	19 0.6	242
Solitary		209 7.0	185 6.2	61 2.0	186 6.2	258 8.6	899
Parallel		75 2.5	51 1.7	73 2.4	50 1.7	0 0.0	249
Associative		115 3.8	224 7.5	226 7.5	127 4.2	163 5.4	855
Cooperative		60 2.0	92 3.1	223 7.4	184 6.1	154 5.1	713
Total		600	600	600	600	600	3000

(Table 94)

Tabulation of social participation by time points

bI	Count Total %	1	2	3	4	5	Row Total
Unocc		24 0.8	5 0.2	0 0.0	0 0.0	2 0.1	31
Onlooker		62 2.1	98 3.3	20 0.7	62 2.1	81 2.7	323
Solitary		109 3.6	163 5.4	155 5.2	51 1.7	142 4.7	620
Parallel		18 0.6	48 1.6	15 0.5	15 0.5	83 2.8	179
Associative		308 10.3	205 6.8	285 9.5	308 10.3	151 5.0	1257
Cooperative		79 2.6	81 2.7	125 4.2	164 5.5	141 4.7	590
Total		600	600	600	600	600	3000

(Table 95)

bII	Count Total %	1	2	3	4	5	Row Total
Unocc		17 0.6	10 0.3	6 0.2	2 0.1	9 0.3	44
Onlooker		141 4.7	113 3.8	126 4.2	150 5.0	125 4.2	655
Solitary		69 2.3	101 3.4	100 3.3	89 3.0	45 1.5	404
Parallel		49 1.6	18 0.6	56 1.9	4 0.1	22 0.7	149
Associative		74 2.5	237 7.9	155 5.2	258 8.6	171 5.7	895
Cooperative		250 8.3	121 4.0	157 5.2	97 3.2	228 7.6	853
Total		600	600	600	600	600	3000

(Table 96)

Tabulation of social participation by time points

bIII Count / Total %	1	2	3	4	5	Row Total
Unocc	4 0.1	4 0.1	0 0.0	3 0.1	2 0.1	13
Onlooker	38 1.3	81 2.7	15 0.5	25 0.8	18 0.6	177
Solitary	93 3.1	124 4.1	162 5.4	114 3.8	146 4.9	639
Parallel	82 2.7	12 0.4	35 1.2	21 0.7	36 1.2	186
Associative	165 5.5	185 6.2	93 3.1	88 2.9	99 3.3	630
Cooperative	218 7.3	194 6.5	295 9.8	349 11.6	299 10.0	1355
Total	600	600	600	600	600	3000

(Table 97)

bIV Count / Total %	1	2	3	4	5	Row Total
Unocc	1 0.0	0 0.0	1 0.0	2 0.1	0 0.0	4
Onlooker	42 1.4	21 0.7	14 0.5	14 0.5	30 1.0	121
Solitary	150 5.0	80 2.7	33 1.1	62 2.1	88 2.9	413
Parallel	117 3.9	43 1.4	0 0.0	49 1.6	43 1.4	252
Associative	231 7.7	85 2.8	144 4.8	107 3.6	81 2.7	648
Cooperative	59 2.0	371 12.4	408 13.6	366 12.2	358 11.9	1562
Total	600	600	600	600	600	3000

chapter 6: Developmental changes

Developmental changes in social play (overall trend)

Analysing the developmental changes in social play behaviour of the eight children, the results suggest that: unoccupied behaviour exist in all cases. There is a decrease from time point 1 to time points 2 and 3 which recovers towards time point 4, but it does not show any changes towards time point 5.

Onlooker behaviour shows a little change from time point 1 to time point 2, and considerable change towards time point 3. There is an increase towards time point 4, which decreases slightly towards time point 5. This type of behaviour exist in all cases.

Solitary play has increased considerably from time point 1 to time point 2, has slightly decreased towards time points 3 and 4, but has recovered towards time point 5. There appear to be more solitary play episodes during the last time point relative to the first time point, however exist in all 8 cases.

Parallel play episodes have shown a decrease towards time point 2 and 3, which recovers gradually towards time points 4and 5. The changes in this type of play behaviour appear to follow a curvilinear trend.

Associative play episodes have shown a decrease towards time point 2, but do not show clear change towards time point 3. The occurrence of this type of behaviour decreased considerably towards time point 4, but recovered towards time point 5.

Cooperative play episodes started at a lower level relative to associative play behaviour, but have shown a little increase towards time point 2, increased considerably towards time point 3, no changes could be inferred towards time point 4, and has slightly increased towards time point 5. The data do not appear to suggest any clear trend in regard to the developmental changes in this aspect of behaviour of the target children. In other words no significant age correlations can be inferred from the data in this research, and the findings of this study similar to those by Smith (1978), failed to support Parten's suggestion with regard to the changes in the developmental trend of social behaviours. Some factors may be taken into consideration:

It was shown in the previous chapter that there were strong correlations between the cognitive complexity of play behaviour and the social interaction. It appears that some types of play activities demand more than one player, whereas some do not; the child being in some sort of play activities it is inevitable to choose one or more partner.

In other words the nature of different play activities perhaps dictate differently and the child may manage to play on his/her own without needing any partner/s. If this is the case, the developmental trend in social aspect of children's behaviour is expected to be somewhat similar to those of cognitive forms. Since the developmental trend in cognitive play did not appear to follow any particular trend, thus the relationships between cognitive and social aspect of play may be regarded as a crucial factor. No further suggestion can be inferred from the data in this study.

The next 9 Tables represent the changes in Dramatic play over the period of observation (Tables 98 to 106).

(Table 98)

Developmental changes in Fantasy/Dramatic play

Tabulation of social participation by time points (overall result)

Figures represent the mean frequency of occurrences of Dramatic/Fantasy play (calculated for eight children) during each time period/time point

	1	2	3	4	5
Self agent	28.8 -	15.9	11	10.9	10.1
Activeotheragent	18.8	6.9	0.6	3.4	3
Substitute agent	11.3	20.1	1.9	7.3	3.8
Behaviouralrole	25.3	75.6	127.3	110	117
Social Role	39.6	26.3	29.8	24.5	96.1

(Table 99)

Tabulation of Dramatic play by session time points

gI	Count Total %	1	2	3	4	5	Row Total
		465 15.5	507 16.9	596 19.9	584 19.5	528 17.6	2680
Slfagent		58 1.9	43 1.4	4 0.1	16 0.5	29 1.0	150
Activeotheragent		31 1.0	21 0.7	0 0.0	0 0.0	16 0.5	68
Substitute		4 0.1	16 0.5	0 0.0	0 0.0	13 0.4	33
Behavioralrole		12 0.4	4 0.1	0 0.0	0 0.0	14 0.5	30
Socialrole		30 1.0	9 0.3	0 0.0	0 0.0	0 0.0	39
Total		600	600	600	600	600	3000

(Table 100)

gII	Count Total %	1	2	3	4	5	Row Total
		523 17.4	595 19.8	523 17.4	600 20.0	558 18.6	2799
Slfagent		6 0.2	5 0.2	66 2.2	0 0.0	0 0.0	77
Activeotheragent		29 1.0	0 0.0	0 0.0	0 0.0	0 0.0	29
Substitute		2 0.1	0 0.0	0 0.0	0 0.0	0 0.0	2
Behavioralrole		31 1.0	0 0.0	2 0.1	0 0.0	0 0.0	33
Socialrole		9 0.3	0 0.0	9 0.3	0 0.0	42 1.4	60
Total		600	600	600	600	600	3000

(Table 101)

Tabulation of Dramatic play by time points

gIII	Count Total %	1	2	3	4	5	Row Total
		531 17.7	530 17.7	357 11.9	411 13.7	243 8.1	2072
Slfagent		11 0.4	8 0.3	0 0.0	21 0.7	22 0.7	62
Activeotheragent		36 1.2	0 0.0	0 0.0	0 0.0	0 0.0	36
Substitute		0 0.0	16 0.5	0 0.0	32 1.1	0 0.0	48
Behavioralrole		22 0.7	46 1.5	203 6.8	107 3.6	174 5.8	552
Socialrole		0 0.0	0 0.0	40 1.3	29 1.0	161 5.4	230
Total		600	600	600	600	600	3000

(Table 102)

gIV	Count Total %	1	2	3	4	5	Row Total
		488 16.3	425 14.2	441 14.7	472 15.7	321 10.7	2147
Slfagent		45 1.5	32 1.1	0 0.0	0 0.0	0 0.0	77
Activeotheragent		1 0.0	12 0.4	0 0.0	0 0.0	0 0.0	13
Substitute		0 0.0	13 0.4	0 0.0	0 0.0	0 0.0	13
Behavioralrole		0 0.0	81 2.7	142 4.7	128 4.3	111 3.7	462
Socialrole		66 2.2	37 1.2	17 0.6	0 0.0	168 5.6	288
Total		600	600	600	600	600	3000

(Table 103)

Tabulation of Dramatic play by time points

bI	Count Total %	1	2	3	4	5	Row Total
		494 16.5	498 16.6	534 17.8	457 15.2	470 15.7	2453
Slfagent		28 0.9	13 0.4	4 0.1	23 0.8	19 0.6	87
Activeotheragent		11 0.4	14 0.5	34 1.1	16 0.5	5 0.2	80
Substitute		34 1.1	42 1.4	0 0.0	10 0.3	2 0.1	88
Behavioralrole		0 0.0	10 0.3	18 0.6	35 1.2	20 0.7	83
Socialrole		33 1.1	23 0.8	10 0.3	59 2.0	84 2.8	209
Total		600	600	600	600	600	3000

(Table 104)

bII	Count Total %	1	2	3	4	5	Row Total
		415 13.8	507 16.9	503 16.8	513 17.1	424 14.1	2362
Slfagent		29 1.0	22 1.7	12 0.4	26 0.9	11 0.4	100
Activeotheragent		41 1.4	0 0.0	0 0.0	9 0.3	3 0.1	53
Substitute		38 1.3	8 0.3	3 0.1	13 0.4	15 0.5	77
Behavioralrole		9 0.3	35 1.2	53 1.8	13 0.4	59 2.0	169
Socialrole		68 2.3	28 0.9	29 1.0	26 0.9	88 2.9	239
Total		600	600	600	600	600	3000

(Table 105)

Tabulation of Dramatic play by time points

bIII	Count Total %	1	2	3	4	5	Row Total
		348	362	287	279	269	1545
		11.6	12.1	9.6	9.3	9.0	
Slfagent		17	4	2	0	0	23
		0.6	0.1	0.1	0.0	0.0	
Activeotheragent		1	8	5	3	0	17
		0.0	0.3	0.2	0.1	0.0	
Substitute		2	8	5	2	0	17
		0.1	0.3	0.2	0.1	0.0	
Behavioralrole		121	172	267	275	259	1094
		4.0	5.7	8.9	9.2	8.6	
Socialrole		111	46	34	41	72	304
		3.7	1.5	1.1	1.4	2.4	
Total		600	600	600	600	600	3000

(Table 106)

bIV	Count Total %	1	2	3	4	5	Row Total
		547	218	161	235	147	1308
		18.2	7.3	5.4	7.8	4.9	
Slfagent		36	0	0	1	0	37
		1.2	0.0	0.0	0.0	0.0	
Substitute		10	58	7	1	0	76
		0.3	1.9	0.2	0.0	0.0	
Behavioralrole		7	257	333	322	299	1218
		0.2	8.6	11.1	10.7	10.0	
Socialrole		0	67	99	41	154	361
		0.0	2.2	3.3	1.4	5.1	
Total		600	600	600	600	600	3000

Developmental changes in Dramatic play (overall trend)

Analysis of the data based on the occurrence of the dramatic play episodes, it suggests that: self agent has slightly decreased from time point 1 to time points 2, 3, 4, and 5, but is observed throughout.

Active other agent has shown a lower level of occurrence than self agent, but follows rather a similar pattern of changes, and is also observed throughout.

Active substitute agent has shown only little change across time points.

Behavioural role: the episodes of this type of play behaviour have shown a decrease from time point 1 to time point 2. This has slightly increased towards time point 3, and slightly decreased again towards time point 4. There is a relatively considerable increase towards time point 5. There were more play episodes of this type over the last time point relative to the earlier time points.

Social role: the episodes of this type of play have shown a sharp increase from time point 1 to time points 2 and 3. This decreases slightly towards time point 4, but recovers during time point 5.

However, the trend of the developmental changes in terms of dramatic play in this study do not appear to be linear as suggested by Watson and Fischer (1980), or

curvilinear as proposed by Matthews (1977), and Cole and La Voie (1985). No particular trend may be inferred from the data. Nevertheless it should not necessarily be regarded as contradictory to those proposed by previous investigators. The most crucial factor in this study is the small number of subjects. Nevertheless, there are two further essential factors to be considered:

The classification system suggested by Smilansky, which was employed in this research, did not turn out to be hierarchical, inevitably this might have influenced the recording of the dramatic play episodes.

Moreover, the methodological problems regarding observational data may be considered as another influential factor. Both the forementioned factors might have caused the observer to underestimate dramatic play episodes.

The actual problems experienced with the classification system and also the method of observation are discussed during the two following chapters.

CHAPTER SEVEN

THE VALIDITY OF SMILANSKY'S PLAY CLASSIFICATION AND THE RELIABILITY OF THE METHOD OF OBSERVATION

The following results were obtained from the main study (detailed in chapters 4, 5 and 6):

a) Children showed considerable variation in the amount of time spent in play activity.

b) Some children preferred constructive play whereas others preferred dramatic play to the other types of play activity.

c) In terms of play partner, it was suggested by the data that children tend to keep their friendship consistent with a few children for different types of play.

d) The pattern of the developmental changes with regard to the cognitive form of play showed very marked variation across the target children.

e) The study failed to support the hypothesis that the pattern of developmental changes in cognitive forms of play would be linear.

f) Other variables examined in this study (verbalisation,complexity, social participation) correlated with the different types of activity, except occasionally

there was evidence that functional play in some cases was associated with high level social and verbal interaction; soliloquy (talking to self) occurred during solitary functional and constructive activity. One assumes that there was an imaginary partner involved in such circumstances, even in the absence of symbolic elements in the overt behaviour of children during the process of play. Further evidence also indicated discrepancies between the observer's and the children's interpretation of the same action.

The findings raised the following questions:

i) The generalisability of the findings, including the reliability of the data obtained at each time point on which the developmental changes have been plotted.

ii) Reconsideration of the classification suggested by Smilansky (1968).

iii) The assumptions of the investigator with regard to the use of play categories; in particular, the adequacy of the method of observation by which the overt behaviour of children is taken as the main source of information.

These three factors will be discussed in turn.

Generalisability

The findings of the study, being based on eight children from the same nursery school, must be limited so far as the generalisation to other pre-schoolers is concerned. Nevertheless the environment of the nursery was a typical one and the target children were quite normal.

The developmental changes in children's play were examined using longitudinal data (over nine months). Each individual child was observed for 20 minutes per session and contributed 3000 raw data entries or 50 days observation. This was divided into 5 time points, each of which represented a 10 day observation or 600 raw data entries spread over a period of nearly two months. Despite some non-independence of entries within sessions it appears that the statistical inferences from time points are based on substantial amounts of data and should be meaningful.

If the statistical inferences are valid, it is therefore essential to examine the validity of the classification system proposed by Smilansky as well as the reliance on overt behaviour in making the classification.

ii) Classification of play

Smilansky (1968), in her influential book, has referred to Piaget, Buhler, Valentine and Isaacs as claiming sequential stages in the development of play behaviour. She herself suggested four general stages in play through which "a normal child moves 'naturally' graduating from one stage to the next in keeping with his biological development" from: functional, to constructive, to dramatic, and finally to games with rules. Her definitions are reproduced below:

> Functional play. At first the play of a child consists of a simple muscular activity based on his need: to activate his physical organism. The games he plays are naturally functional. He repeats his actions and manipulations, imitates himself, tries new actions, imitates them, and so on. At this stage, too, the child makes utterances and plays at repeating and imitating them, laying the foundations for language articulation. By manipulating toys and play objects he gains experience that helps him to know his immediate environment. This knowledge prepares him for the next stage of his development.

> Constructive play. This form of play introduces the child to creative activity and thereby to the personal joy of creation. At this stage he learns the various use of play materials; he moves from functional activity that results in "creation". He is now able to sustain his play and concentrate for longer periods and sketch a theme around which to organize his play. The child who is able at this stage to achieve play goals he sets for himself is also able to achieve, to some degree, play goals set by others. Development from functional play to constructive play is progression from manipulation of the form to formation. From sporadic handling of sand or bricks the child moves to handling from these materials that will remain even after he has finished playing. The child expresses his activity through these "creations" and realizes himself as a "creator".

Dramatic play. The next stage in play development is symbolic play, which appears in the dramatic play of the child.

Through dramatic play the child can freely display, in a variety of ways, his physical progress, his creative ability, and budding social awareness. He can find a source of satisfaction in the relationship of his play with the adult world. This relationship allows him to acknowledge the objective world situation, and at the same time, to substitute an imaginary situation that satisfies his personal wishes and needs. Dramatic play has great value in developing the social tendencies of the child because it allows him to be, simultaneously, an actor, observer, and participator to the fullest extent of his abilities, in a common enterprise.

Games with rules. This form of play, according to the theoreticians, is the highest stage reached in play development. Here the child has to accept pre-arranged rules and adjust to them. More important, he learns to control his behaviour, actions, and reactions, within given limits. This is the principal form of play that tends to accompany us into our lives".

A shortened version of this category scheme has been suggested by Rubin, Maioni & Hornung (1976). The new version of these definitions are reproduced below:

Functional play - simple repetitive muscle movement with or without objects.
Constructive play - manipulation of objects to construct or "create" something.
Dramatic play - the substitution of an imaginary situation to satisfy the child's personal needs and wishes.
Games with rules - the acceptance of pre-arranged rules and adjustment to these rules.

Smilansky's classification and particularly the shortened version of it suggested by Rubin is popular especially amongst American as well as Canadian

psychologists. This classification in conjunction with Parten's (1932: unoccupied, onlooker , solitary, parallel, associative and cooperative) as a "nested scheme" has been used for recording both cognitive and social forms of play, in many recent studies (e.g Pellegrini, 1977; Rubin et al, 1976; Rubin & Krasnor, 1982; Enslein & Fein, 1981; Pellegrini, 1982). High inter-observer reliabilities were reported in these studies, but no consideration was given to the validity of this classification system. Even contradictory reports of the previous investigations did not lead to any question along this line. For example, there has been evidence that constructive play did not show any relationship either with functional play, or with dramatic play. When functional play decreased, dramatic play increased, but constructive play did not change (Rubin, Watson and Jambor, 1978; Pellegrini, 1982)

However, the high inter-observer reliability reported on this classification can be simply explained by the fact that any classification system, however arbitrary, can be used consistently given sufficient practice. But the validity of this category scheme has not been examined before.

The present study, when examining the validity of this hierarchical system, failed to provide support for Smilansky's claim. As a next step, it seemed important to

check the origin of the classification system as suggested by Smilansky.

Buhler (1935) is one of the psychologists whom Smilansky has cited in developing her classification of play. However, in her study (From Birth to Maturity, 1935), Buhler suggests:

"Our observations have enabled us to set up definite criteria for distinguishing between the behaviour of the child whose activities with material express a striving towards production from that of the child whose central urge is the practice of function irrespective of the material with which he is occupied. This diffrentiation leads to two highly relevant and basic definitions for this phase of childhood. Play is that activity with or without materials in which bodily movement is an end in itself. We define work as the systematic effort to create a new entity. Between the second and the sixth year this constructive or work aspect comes to dominate the child's activities to great extent. At first the child makes only a nameless something, generally with blocks. Later the child names and indicates the significance of the things he has made. Since the child at this stage names his products regardless of what they look like, we consider this kind of work naming symbolic. Later from about five years on, the child's aim becomes the realistic reproduction of a definite object. A normal child of 5 or 6 has a rule, learned to set realistic reproduction as the goal of his handling of material"(Buhler, from birth to maturity. page 82).

Handling materials, and constructing things during childhood, Buhler has given different interpretations: first is constructing of nameless things, which reffers to functional activities, second is nameing the products regardless of what they look like and Buhler regarded them as symbolic activities, and third is realistic reproduction of a definite object, which she considered them work. If

he former form of constructive activity (purposeless) is that included by Smilansky in her classification system, it is not however 'creative' activity. According to Buhler this type of activity is functional (funktionslust) but turns to symbolic activity as soon as the player can name the production of his/her action. On the other hand if the definition of Smilansky is 'creative' from the age of five, then this is work and no longer play. However, Buhler's interpretations appear to contradict Smilansky's in one way or another. Furthermore Buhler's classification system concerns object manipulations, and not the developmental stages in play activity, thus it does not provide support for the validity of Smilansky's category scheme and leaves the validity of this classification an open question.

Smilansky's main source of information is Piaget. Piaget was primarily concerned with cognitive developmental changes. He mirrored play to the developmental level of children's cognition. To distinguish 'play' from 'work' Piaget's criteria were the two poles of 'accommodation' and 'assimilation'. Work was defined as being pure accommodation or primacy of accommodation over assimilation, whereas play was pure assimilation or primacy of assimilation over accommodation. He classified play in parallel with cognitive development of children as follows:

Primitive play begins almost identical with the set of sensory motor behaviour, of which it is only one pole; that of those behaviours which no longer need new accommodation and are reproduced purely for 'functional pleasure' (K.Buhler's Funktionslust). But with the interiorisation of schemes, play become more distinct from the adaptive behaviours properly so-called (Intelligence) and tends towards assimilation as such. Unlike objective thought, which seeks to adapt itself to the requirements of external reality, imaginative play is a symbolic transposition which subjects things to the child's activity without rules or limitations. It is therefore almost pure assimilation, i.e. thought polarised by pre-occupation with individual satisfaction. Since it is mere expansion of tendencies, it freely assimilates things to one another and everything to the ego. while therefore in the initial stages of representation the aspect of copy which is inherent in the symbol as 'signifier' is a continuation of imitation, what the symbol signifies, i.e, the 'signified' may vary between the adequate adaptation characteristic of intelligence (assimilation and accommodation in equilibrium) and free satisfaction (assimilation subordinating accommodation). Finally, with the socialisation of the child, play acquires rules or gradually adapts symbolic imagination to reality in the form of constructions which are still spontaneous but which imitate reality. In these two forms, the individual symbol yields either to the collective rule, or to the objective or representational symbol, or to both.

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 accomodating and assimilating character of their representation, converge on the conceptual sign, though without being identified with it (Play, Dream and Imitation in childhood, P.87, 88. See also pages 107, 110, 112, 113, 142, 146).

Piaget's interpretations of the different stages in cognitive development do not appear to serve the same purpose as Smilansky's, with regard to the developmental stages in play behaviour. In fact it provides a strong and explicit explanation, rejecting Smilansky's hypothesis

(p.113, end of 3rd paragraph). Instead, it provides a clear picture showing the development of symbolisation and signification during early childhood. Piaget clarifies that during a certain period a 'signifier' signifies a 'conceptual sign' which is indeed removed from its mechanism, it is personal and exists only in the child's mind. In other words it is only the child who knows what is signified. From this explanation it is quite obvious, where exactly an observer may be misled, when observing children's play behaviour.

However, Smilansky, in her study (1968) was concerned with the effects of sociodramatic play on disadvantaged pre-school children. Her proposed classification, despite being used in a considerable number of studies, appears to be a misinterpretation of Buhler and Piaget. Rubin, Pellegrini and a number of psychologists have used this classification system without sufficiently considering its validity. Commonly shared terms, definitions and views with regard to the order of emergence of different types of play behaviour in all category schemes are: functional, symbolic, and games with rules. 'Constructive activity' does not appear to have a real place in this hierarchy, and emerges in parallel with either symbolic activity (Buhler) or with games with rules (Piaget). Moreover, Smilansky's proposal is not based on any research finding. It seems to be only a

suggestion put forward by her which for some obscure reason psychologists accepted and used in their studies.

Questions with regard to the existence of constructive play and its order of emergence are yet to be addressed by future studies. Further use of this classification needs careful consideration.

iii) Examination of the method of observation

It also appeared from the main study (see chapter 5), that the overt behaviour of children does not always correspond with their covert behaviour or their personal meaning. For example, when soliloquy occurred during solitary activity, it was thought that the child might have been playing with an imaginary partner, even if there was no further symbolic indication in the overt behaviour of the child. Similarly, functional play was occasionally associated with dialogue at an advanced level of social participation. These findings cast a shadow of doubt over the validity of pure observational methods or relying entirely on overt behaviour, in studing children's play.

Some time after the observational data for the main study had been collected, and while the statistical analysis was still in progress, the investigator became interested in examining the adequacy of observation as a method. Following that, during some informal observations in the nursery class, children's play behaviours were scored, using

the same criteria as in the previous observational study. Immediately after, while the same play episode was still going on, children were asked to talk about their actions and give their own interpretations. Their comments often led to a different interpretation from those of the observer. Here are two examples:

i) There were three children sitting on a barrel in front of each other, banging their feet on the sides. There was no indication of imaginary events whatsoever. By definition, it could not be beyond functional play (simple repetitive muscle movement). The children were asked to explain their actions. They interpreted the situation as a galloping horse (in the mind of the children, the barrel was being used as a horse). This showed that, contrary to the observer's decision, this behaviour was in fact symbolic and not functional. Those children were aware of what was going on in given play situation and each of them was playing his/her own part.

ii) A little boy, occupied with washing his doll, was asked what he was doing: "I am washing my dirty doll, can't you see?!" This episode had been scored, and could easily be regarded as, an imaginary activity in which the doll is treated as a baby who was being given a bath. The child's explanations were free from symbolic elements and what in fact was happening, could not be considered 'play' at all.

Chapter 7:Validity of play classification

The findings of the first study, together with the informal trials suggested that a further investigation be carried out upon the discrepancies between the observer/s and children's reports on the same actions. The study was carried out in the same nursery class, over a period of six months, and is reported in the next chapter.

CHAPTER EIGHT

AN ALTERNATIVE METHOD OF STUDYING CHILDREN'S PLAY

The study of children's play has been almost entirely limited to either experimental or observational data, each of which has its own advantages and disadvantages, but in both of which the decisions are those of the observer/experimenter. Apart from some clinical studies, children have not usually been given the opportunity of commenting on their own actions. Recently American psychologists initiated this method of talking to children. For example, King (1979) interviewed children in kindergarten to examine discrepancies between adult and children's perspectives on play and work. She reported that children were fairly clear in their replies to the questions they were asked. To them those tasks assigned by the teacher/adults were work, otherwise play. According to the children in King's study, lack of adult intervention in children's activities characterises them as play.

Before her, Singer (1973) used this method, asking children about their play behaviour in particular relation to the existence of make-believe play. The present study uses the method of interviewing children to examine the

reliability of pure observation, especially when Smilansky's (1968) categories are used.

A double blind study was designed in which two sources of information were obtained: one based on observational data and the other based on the explanation given by children of their own actions.

METHOD

Overall Procedure

Observations of children's activity (using Smilansky's categories) were made by two observers. Independently, another experimenter interviewed each child after an observation was completed. These interviews were transcribed, and coded by a fourth person (again using Smilansky's categories). The two methods of classifying children's activities were compared.

Each individual child contributed 5 data entries of each type of play (functional, constructive, dramatic). From previous experience games with rules was very rarely observed at this age, therefore it was omitted from the classification system for this particular study.

Chapter 8: An alternative method

Pilot Work

Some time was spent training the two observers and to gain interviewing experience. The final inter-observer agreement obtained with the first observer was 95.3% and with the second observer was 95.4% using the formula, agreement= A/(A+D/2).

Interobserver reliability

The following table shows the agreement between the author and the two observers on each type of play.

Fun= Functional

Con= Constructive

Dra= Dramatic

Ob= Observer

(Table 107)

	Fun	Con	Dra	overall
Ob I	96.5%	96.5%	93.0%	95.3%
Ob II	93.0%	96.5%	96.5%	95.4%

Chapter 8: An alternative method

Subjects

19 children, 11 boys and 8 girls were selected as being among the oldest children (mean age= 50 months) from the two sessions of the same nursery school as was used in the previous study.

Initially 25 children were observed but sufficient data was obtained only for 19 children. Some children were withdrawn because of being reluctant to talk, absences, illnesses, etc.

Equipment

A checklist was made out for each individual child separately. Each checklist consisted of:

Name of the child; name of the observer; number of observation (1 to 15); time of observation; type of activity (functional, constructive, dramatic); and comments. (A copy of the checklist can be seen in Appendix e). These and a stop watch were used by the observers. A radio microphone was found appropriate for recording the interview, as it did not distract the children. The interviewer hung a tiny microphone under her collar and kept the transmitter in her pocket. The receiver was placed in the distance, inside the nursery but out of the children's sight.

Data collection

Two undergraduate psychology students were trained on the basis of Smilansky's definition and classification system to a criterion of 95% agreement or more (see above). Each of them helped in data collection, one in the morning session and the other in the afternoon, throughout the study. Each observer, observed the target children individually, looking for a certain child in one of the three types of play (Functional, Constructive, and Dramatic). S/he made the decision about play category independently from the interviewer. After the decision was made, the interviewer was signalled, and given the name of the child and the number of observation. This was repeated by the interviewer and recorded on tape. The observer watched the child for another extra minute to make sure of the type of activity s/he had decided on. After one minute was over s/he again signalled the interviewer who then interviewed the child, asking him or her: "what are you doing?". She tried to avoid giving the children any feedback, by repeating children's own words if necessary in different intonation. At the end, she added: "anything else?/what else can you tell me?". The length of the conversation of course varied across the subjects. The interview was recorded all the way through. The interview was cancelled if the child was reluctant to give any account

or if s/he had changed the activity before the interview commenced.

The tapes were transcribed and a note identifying the play materials was added. It was given to an independent scorer, with a copy of Smilansky's definitions and classifications. The scorer was quite familiar with children's play and had obtained high reliability in observing Smilansky's categories with the author on several occasions during the course of the main study. The average agreement was 84.9%. He classified the children's activity using only the transcribed data but the same definitions as the two observers had done earlier.

Results

The results revealed discrepancies between the two sources of information, each obtained by a different method. The results are summarised in the following table (Table 108).

The general format of the table shows, in rows: the decisions made by the scorer upon the interviews; and in columns: the decisions made by the observers.

Chapter 8: An alternative method

Statistical analysis

Table 108 shows the cross-tabulation of the information obtained through the method of observation by those decided after children were interviewed.

In each cell, the top number represent the frequency occurrence, and the bottom number represents the percentage agreement between the observers and the scorer.

(Table 108) OBSERVER

CODER	DRA	CON	FUN	TOTAL
DRA	59 (21%)	51 (18%)	45 (16%)	155
CON	14 (5%)	23 (8%)	20 (7%)	57
FUN	16 (6%)	16 (6%)	17 (6%)	49
NO PLAY	6 (2%)	5 (1%)	13 (4%)	24
TOTAL	95	95	95	285

X^2=8.86 df=6 n.s.

Chapter 8: An alternative method

According to the data tabulated in Table 108, the scorer identified 155 symbolic episodes, whereas the observers noted only 95 episodes; they agreed on only 59 episodes. The percentage agreement calculated: (using the formula C= A/A + D/2) is 47%.

Compared with 95 episodes of constructive play, identified by the observers, the scorer identified only 57 episodes; they agreed only on 59 episodes. The percentage agreement is 30%.

With functional play the observers identified 95 episodes, the scorer identified only 49 episodes. They both agreed on 17 episodes only; percentage agreement is 23%. The scorer also came across 24 episodes which he could not classify as play of any type.

If there were strong agreement between the observers and the scorer, the row and column totals would have appeared almost the same, and the diagonal cells would have the higher entries, but this is not the case. In fact, the scorer and the observer only agree 35% of the time, overall.

Furthermore, the difference between the two observers was examined to see if either gave better agreement with the scorer.

Chapter 8: An alternative method

Tables 109 and 110 show the discrepancies between the observers individually, and the scorer. The general format of the tables show in row, the observers' decision and in column the decision made by the scorer:

Observer I

(Table 109)

	Dra	Con	Fun	Total
Dra	32	28	27	87
Con	9	14	11	34
Fun	10	10	13	33
No play	4	3	4	11
Total	55	55	55	165

Observer II

(Table 110)

	Dra	Con	Fun	Total
Dra	27	23	18	68
Con	4	9	9	22
Fun	6	6	4	16
No play	3	2	9	14
Total	40	40	40	120

The summary of the percentage agreement between each observer and the scorer is shown in Table 111.

(Table 111)

	Dra	Con	Fun	Overall
O I	48%	31%	29.5%	35.5%
O II	50%	29%	14%	33%

The two observers were slightly different, but the difference is not significant.

The two observers both had obtained agreement higher than 93% with the author, and the scorer also had obtained 84.9% agreement with the author, using the same classification.

Discussion

Information obtained through two different methods was applied to the same actions, using Smilansky's categories. The results obtained from a test of significance does not suggest a significant agreement between the two methods. Since the observers and the scorer had obtained high reliability with the author on several occasions, therefore we should not expect the agreement between the observers and the scorer to fall much below their product if they were observing the same behaviour. In fact the agreement overall was 35%. This result can thus be assumed to reflect primarily the difference between the two sources of information: direct information, and children's own interpretation when they were interviewed. Indeed, on a chi-squared test, there is no significant association between the two data sets (X^2 =8.86, df=6, n.s.).

This lack of agreement could be due to the following factors:

a) Although the observer and the scorer have used the same definitions, each of them might have applied their own criteria, as a result of finding Smilansky's criteria difficult to interpret. This cannot be true of this particular study as the investigators had reached a very high level of agreement through sufficient training.

b) Genuinely different information is available from the two

data systems. In particular, what the child says about his/her actions may provide more definitive information as to whether activity is symbolic or not. Using previous examples: behaviour such as sitting on a barrel, kicking feet, must be scored as functional without further evidence. This further evidence might be provided by spontaneous vocalisation, but, in its absence, talking to the child may provide the information that the barrel is a 'galloping horse'. This interpretation can well explain the finding that the scorer finds rather more episodes to be 'symbolic', than do the observers. Many apparently functional or constructive activities turn out to have a symbolic content, if the child is interviewed or has talked about his/her actions. Conversely, washing a doll may be scored 'symbolic', even in the absence of spontaneous vocalisation, simply because the materials are often associated with fantasy and/or replica objects. Here, the interview may provide definitive information that no symbolic play is present.

Thus the use of Smilansky's categories by observation alone may be unreliable (if we assume the child interview to be valid), and especially may underestimate the amount of symbolic play or activity. This would be particularly true of observation using short time samples, where relevant and spontaneous vocalisation would be less likely to be

recorded. Even with prolonged observation, however, relevant spontaneous vocalisation might be absent.

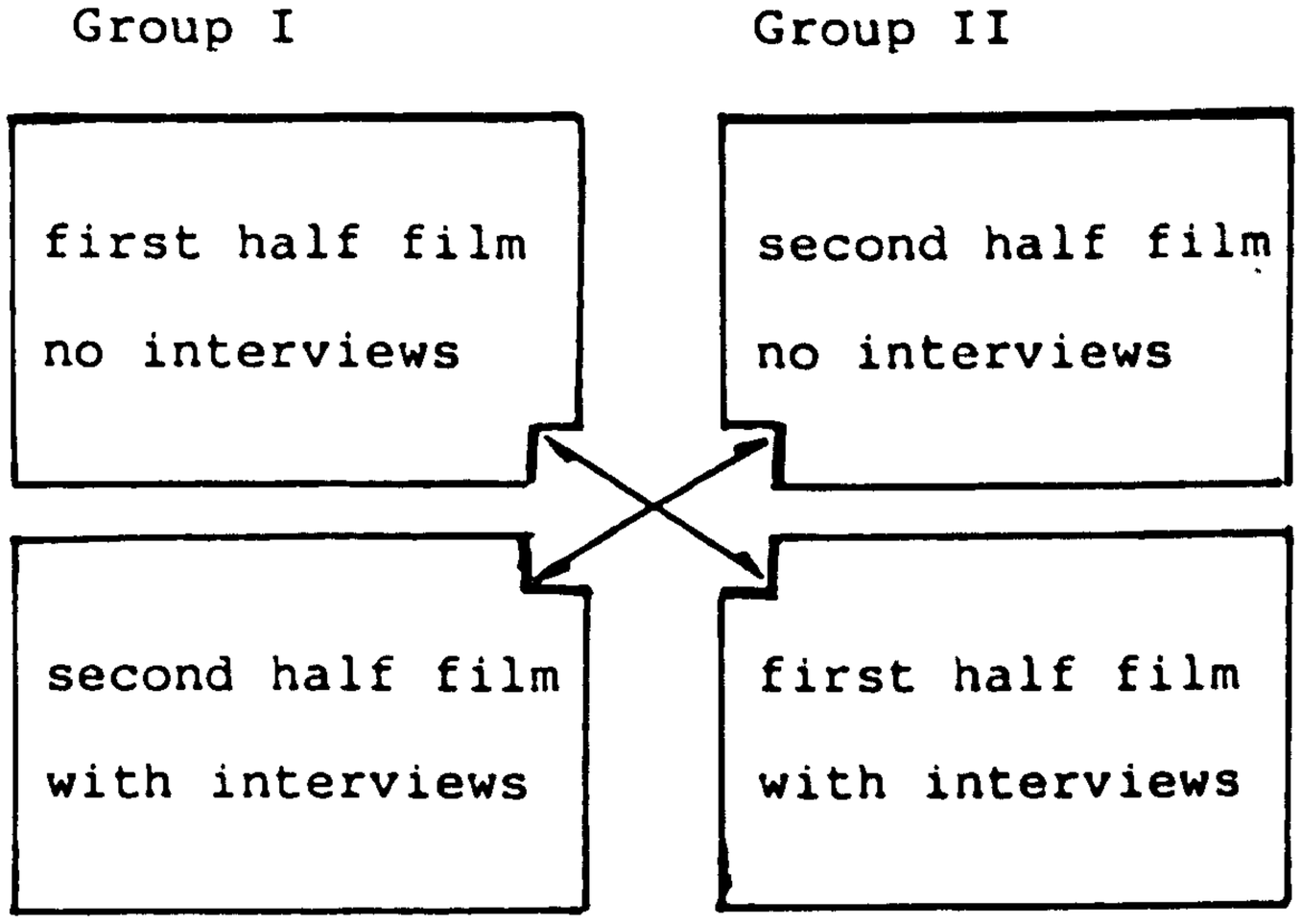
Nevertheless, the generalisability of the results from this study is limited, since the data were collected from one nursery school. Although the number of data entries on each type of play (5 data points and a total number of 285), and the number of children may be considered as representative, only two observers and one scorer identified the samples. Thus the decision was made to carry out a subsequent study in which a larger number of observers and scorers would contribute.

FURTHER WORK

A subsequent study was made jointly by the author with P.K. Smith & N.Gore. This time 30 observers/scorers participated. It was designed to broaden the base of the previous one. There was no set number of records of particular kinds of activity; instead, 46 episodes of spontaneous activities of pre-school children (age 3-4) were filmed. Immediately after, children were interviewed. The accounts they gave of their own actions were also recorded on cassette-tape. Two copies of the film were produced, one with and the other without the children's interview, both of which were divided into two parts, A and B. Thirty subjects aged about 18 years were recruited from nursery nurse training courses. Revised versions of Smilansky's categories were presented. The "A" part of the film (23 episodes) without children's interview plus the "B" part of the film (23 episodes) with interview were presented to a group of 15 subjects who acted as both observers and scorer in watching parts "A" and "B". Similar treatment was provided for another 15 subjects who received the "B" part without interviewing and the "A" part with interview. Each group was provided with a 10-episode practice. The findings

were analysed by a cross comparison as follows:

cross comparison



Each subject scored each episode as functional, constructive or dramatic. A modal category was then assigned depending on the distribution of scores over the 15 subjects. Consistency was examined within, and between the groups.

The first comparison was of group I with and without interview, and the second, the similar comparison for group II. Tables 112 and 113 show the results. In terms of the changes in modal scoring between the two conditions the results show that: in group I 17/23 episodes stayed the same under both conditions, but 6/23 changed (Table 112). Similarly in group II, 16/23 episodes stayed the same in both conditions, but 7/23 episodes changed when interview data available (Table 113).

Columns represent the 'with interview' conditions and the rows 'without interview' conditions.

Group I
(Table 112)

	Fun	Con	Dra
Fun	1	2	3
Con	0	7	0
Dra	0	1	9

Group II
(Table 113)

	Fun	Con	Dra
Fun	4	0	2
Con	0	5	1
Dra	3	1	7

As the results reveal, the changes in classification are not limited to a certain type of play, but can be seen in various directors. It is important to note that mainly functional and constructive play episodes moved into the dramatic category, and that no movement occurred from constructive to functional.

Results, in terms of the consistancy within a condition (with or without interview) show that the majority of 33 episodes were agreed upon and stayed in the same classification under both conditions (with and without interview). But 13 episodes received different classification, where accompanied with interview data. This considerable number or nearly 30% of the data, falling into a different classification, brings the agreement between the two sets of data (observation and interview) below the expected level (at least 80%), and confirms the findings of the previous study. According to the data, changes in classification were not limited to one type of play, but were in various directions depending on the method used. When interview data available, most commonly episodes described as functional play fell into different categories of either constructive or dramatic and significantly changed, but never from constructive or dramatic to functional.

However, this study may be criticised on the grounds that: there were more Dramatic play episodes recorded, and there was no set number of data entries and choice of activity to film. This, in my opinion, is the major fault.

Consistency within the members of the groups in each condition (with, or without interview), was examined. For

group I, it was found that 13/23 and 12/23 episodes were judged consistently on a sign test. For group II, there was better agreement with 18/23 and 20/23 episodes were judged consistently; only 2 episodes could not be reliably scored at all. However, lack of consistency may be addressed to the ambiguities of the definitions and the classifications used in this study, and also the absence of a proper training procedure.

Overall Conclusion

The findings of both studies, qualitatively and quantitatively suggest that: what can be observed in children's behaviour does not appear to be enough for the observer to discover what is going on during the play situation. A pattern of behaviour stands not necessarily for itself but represents the purpose of the player and his/her thought behind it, in other words the action represents the mental process of the player, in the play situation. This action should be interpreted with the aid of the child's own account, not just through the observer's perception of the play situation.

Studying animal behaviour, one must be content with the methods of observation and experiment. Similarly in studying very young children, the investigator/s must make do with observational methods as babies cannot be

interviewed verbally. An animal ethologist must rely on the objective aspect or overt behaviour of the animal under investigation, but when studying pre-school age range children, the investigators should not rely only on information based on overt behaviour of the subjects. Since the overt and the covert behaviour of children do not always correspond, investigator/s need to get access to the covert behaviour as well as what appears in the surface. In this case, they have to provide themselves with further information in connection with the children's covert behaviour, not only using the existing methods, but also complimentary ones, which do not disturb the children.

Nonetheless the method of interviewing children and taking account of children's interpretation, as much as it can be useful is also open to the following criticisms:

a) The accuracy of the information obtained from children may be questioned.

b) The developmental level of expressive language of the pre-schoolers may be limited.

c) Children may be reluctant to participate in an interview.

The author would like to admit that she is not happy with the term 'interview', since 'talking' to children or 'making them talk' about their action in a very friendly way does not appear to have the same meaning and effect as an 'interview'.

These factors will be discussed in turn:

a) If the accuracy of the information obtained from children's interview is questionable, so is the accuracy of the information obtained from children's observable pattern of behaviour. In an observational situation, in order to identify symbolic activities, an observer may satisfy him/herself by any symbolic element/s which appear during the process of play. When a child is asked "what are you doing?" I can see no cause for the child to make up or create an answer. Whereas in fact when a child is asked "why are you doing this?" it is quite likely for the child to rationalise his or her own action in order to escape criticism or to please the interviewer. Since both sources of information are based on the understanding of the child, why should one method be considered accurate and the other not? Furthermore in my opinion children do not have to display in their actions what they have in mind just to serve the needs of the observer during an observational situation. Children obviously act as they wish themselves, and comparisons based only on observation may be misleading due to several factors. These include the child's type of personality (introvert, extravert), and the observer's assumptions, expectations or confusion. These all can be avoided by simply considering children's interpretations of what they are doing.

b) It appears that by 3 or 4 years children's expressive language is quite adequate for the interview situation. In the three studies above a total of 338 episodes were recorded. The children's interpretations were understood with few if any problems.

c) The major problem is the children's cooperation with the interviewer. They may be reluctant to answer when they are asked to give an account of their actions. The reluctance of children may be limited to one or a few interviews, but it can also cover the whole duration of the study. This study in fact started with 25 children. One child did not cooperate all the way through the study; two of them took an early holiday; another three took part occasionally. Some of the interviews were cancelled several times.

There are however more explanations for the limitation of observational methods within the Piagetian frame-work. Piaget in fact was concerned with the union of sign, symbol, signifier and signified. For example in observation 64 and 65 (p.96, Piaget, 1951) when the "Donkey's tail" (as signifier), signified (the pillow) the action of really going to sleep, he concluded that:

> "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 the stage IV and V. They are now applied to new and inadequate objects and are carried out with strict attention to detail although are entirely make-believe. There is therefore representation, since the "signifier" is dissociated from the "signified" which is a situation which is non-perceptable and only evoked by means of available objects and actions"(Play, Dreams and Imitation, pp. 101-102).

This example precisely explains the limitation of observation as a method in the situation, when the signified is non-perceptible.

In this example Piaget was the only one who was aware of the similarity of the fringe of the pillow with the "donkey's tail" so his information about his own children could easily be integrated with his observation. It is totally different from focal sampling observations on largely unfamiliar children in which an observer appears to be limited to the objective thought of the child.

The findings of these two studies question the ethological investigations studying children's play, like those studies in which Smilansky's classification has been used. This covers a vast number of studies in this field, including those on social class differences in types of play. Further use of this method needs careful consideration, depending on the main concern of the study. Focal sampling techniques on their own appear to limit the

observer to the observable aspect of the child's thought which does not necessarily correspond to the actual happenings in play situations. In an extensive longitudinal study, the possibility of integrating information would increase and it is less likely that the observer could be misled. Further use of the pure observational techniques should be carefully considered. The method of talking to children and taking their comments into account is suggestive as a complementary or alternative strategy to that of pure observation. Through this method, the investigator is led to untapped areas of understanding children and also may avoid certain misunderstandings, errors or confusion.

CHAPTER NINE: IMPLICATIONS

THE RESULTS OF THIS STUDY AND SUGGESTIONS FOR FUTURE WORK

The present thesis comprises two different parts, according to which the findings can be categorised.

The first part and the main body of study, namely chapters three, four, five and six, is a set of observational, longitudinal data, which is analysed in various ways. The results of this part suggested further examination of the classification scheme devised by Smilansky and also of the method of direct observation.

The second part of the thesis considered these issues further. Chapter seven discusses and examines the origins of the classification scheme devised by Smilansky. In chapter eight, the validity of relying entirely on observational data is examined and usage of interviews as a complementary or alternative method is suggested.

This chapter (chapter nine) relates the findings of the present study to the existing theories and models in the field of children's play; and to the findings of previous studies. The interview data was informally analysed further and will be discussed later in this chapter, as a suggestion for 'future work' and a new direction in the field of children's play.

Chapter Four examined the behavioural significance of children's spontaneous activities during free activity choice time. Tabulations of the different types of activity by social participation, verbalisation and level of complexity suggest that: activities which fall into the play categories (Functional, Constructive and Dramatic/Fantasy), appear to be advantageous, as opposed to those which are 'non-play' activities. This is because play activities are most often associated with social and verbal communication.

Also a comparative analysis across different types of play suggest that by these criteria, fantasy play is significantly superior to the other forms of play, being most often associated with social and vebal interaction at an advanced level. These findings must however be qualified in relation to the problems of classification and methodology, raised in chapters seven and eight.

In Chapters seven and eight it was found that the frequency of occurence of fantasy episodes was under-estimated by observers, if one accepts interview data as valid; there are more fantasy episodes taking place which are not distinguished by merely observing children. The major difference between those fantasy eoisodes which have been recorded by direct observation from those which have

not been so identified is that in recording fantasy episodes the observer relies on evidence from the overt behaviour of the child, which mainly tends to be spontaneous verbalisation; in the absence of such verbal indication, the play episode tends to be recorded as either functional or constructive play. In this respect the actual play material seems to have crucial role.

Flexible play materials like sand and water, and constructional play materials such as lego and blocks create one kind of difficulty for the observer. As soon as children name the products of their actions regardless of what they look like, the acttivity may be thought of as symbolic. Nevertheless, in recent studies, even if children name the end products of their activities, the decision on the type of activity is often in favour of constructive play or functional play, rather than fantasy play. On the other hand, activities with 'symbolic' play materials such as dolls, or minature households, may automatically be recorded as fantasy play, even if the activity is not otherwise called as fantasy. An obvious difficulty here is where to make the distinction between symbolic and non-symbolic behaviour.

However, the problems with studying play tend to be more comprehensive, as is evident from considering the problems of play definition.

Any analysis that actually requires definition of play behaviour, leads to confusion and controversy. In the absence of a universal definition the boundary between play behaviour and non-play behaviour can not be clearly identified. Therefore research questions and findings may be difficult to relate. This problem is not limited to the developmental psychologists, but it is a common problem in studying play from any standpoint. This has led some investigators to dispense with the concept of play as a potentially viable scientific concept.

Another crucial factor in studying the play of children is the context of play: the extent to which children share the adults interpretations. Are investigators clear enough about children's behaviour? does the pattern of behaviour or what we understand from a given pattern represent what actually goes on in the child's mind? in other words do covert and overt behaviour of children correspond to a significantly extent? To answer questions along these lines, one has to question the validity of the methods of studying children's play behaviours.

During recent years, previously separated branches of behavioural sciences (human and animal) have developed a closer relationship, resulting in a convergence in the

interest and methods of developmental psychologists and ethologists. This convergence occurred in several ways, the points of contact being: the direct application of ethological methods in studying human behaviour; use of animal studies as a source of hypotheses; increasing use of more empirical and objective measures of social behaviour; the use of evolutionary framework, and of recent data on the processes of ontogeny of nonhuman behavior to enrich the theoretical understanding of human behavioural development. The ethological framework and the use of observational methods has led to an attempt to identify play in terms of its motoric characteristics. Because it is confined to overt behaviour, this characterisation is perhaps germane for the actions of animals at a pre-symboliclevel; it is less helpful for defining play and identifying fantasy play in post-infant humans.

The development of sophisticated symbolic abilities in humans is accomplished through the interiorisation of movements that first occurs at around eighteen months of age (Piaget, 1951). From this age, children's play become increasingly characterised by manipulation of symbols themselves. Such play cannot be identified by strict analysis of organism's overt behaviour, since the development of sophisticated linguistic and symbolic skills moves the organism's transactions from the plane of action

to abstraction. Consequently, ethological as well as observational studies in children's play have to include this symbolic plane of activity in their analysis. It is essential to realise that for children the content of play itself is fashioned out of symbols, and the description of the motor activity fails to capture the totality of their play.

In Chapter eight of the present study the validity of the method of direct observation is examined. With regard to the discrepencies between the observer's and children's interpetation of the same actions, it was evident that the frequency of occurrence of fantasy play was underestimated by observers. In the light of these findings it can therefore be suggested that there are perhaps two different types of 'Fantasy' episodes occurring: 'Overt Fantasy' and 'Covert Fantasy'. The observer is quite able to identify Overt Fantasy, without too much dificulty, mainly by spontaneous verbalisation or what Piaget called children's 'loud thinking'. Contrarily, cases of Covert Fantasy can not be identified by pure observation, since the symbolic nature of the activity is at a purely abstract level, in the child's mind. So far as previous observational studies, including the present research, are concerned, the observer has relied on the overt behaviour of children, in fact

recording 'Overt Fantasy'.

Not withstanding these methodological problems, the results in chapter four do suggest the association of play, particularly Overt Fantasy, with dialogue and with social participation. If this associations represent any kind of casual link, then the findings of this study appear to be supportive of Smith's (1982) hypothesis as to the function of fantasy play and also generally supportive of the practice theory of play.

Practice theory of play originally stemmed from the writings of Groos (1898, 1901), on the play of animals and humans. This notion of play reappeared in a number of contemporary studies in play of animals and children.

Within this theoretical framework, play has been viewed as a source of variability in cognitive adaptation and behavioural flexibility (Piaget, 1951; Vygotsky, 1967). During the process of play the organism discovers an array within which new behavioural combinations and strategies may become useful in different contexts. This suggestion is applicable to both social and object play (Sutton-Smith, 1966, 1967, 1976; Bruner, 1972).

Sutton-Smith concentrated on the 'as if' characteristic of play, where children substitute objects/situations and

treat them as if they were something else. This process allows children to break free from the established regulations in order to apply their own. It helps the development divergent thinking, giving the freedom of ' framing' and 'reframing', allowing role reversal, and facilitating the development of alternative symbolic constructions.

Bruner (1972) has concerned himself with function of play in the development of behavioural flexibility in motor skills. He has suggested that in play situations children pay attention to the process of play do not concern themselves with the end products of their play activities. During this pocess children create new behaviouralcombinations which help the develpment of tool using strategies. Although the notion of play as a process oriented activity tends to be debatable, this concept of play has stimulated a number of studies on: exploration (Vandenberg, 1978), the development of adaptive thinking (Singer & Singer, 1976), and problem solving (Sylva, 1976; Smith & Dutton, 1979; Vandenberg, 1981a). A study by Simon & Smith (1983) argued against the results of the latter set of studies. Nevertheless, with regard to the results of the present research, and also play and practice, there is still room for further investigations in this area of play.

Chapter six examines the developmental changes in play and fantasy. According to the data no particular trend can be inferred, but the results do show strong individual differences. The failure to find any general trends may result from either the classification system used in this study or the method, both of which are examined in chapters seven and eight.

Smilansky suggested that children during the course of their natural development move from functional play, to constructive play, to dramatic play, and finally to games with rule. Smilansky's classification and its problems have been discussed in chapter seven. This classification system in conjunction with Parten's classification of social play have formed a 'nested hierarchy' which has been widely used and claimed as a reliable measurement scheme in studies of age and social class differences amongst preschoolers. The validity of using Parten's classification in a hierarchical way has been reported to be doubtful (Smith, 1978), and Smilansky's remains unexplored. Neverthless a number of studies have reported correlations with age and socio-economic background of the child and the type of play (Rubin, et.al, 1976; Pellegrini, 1981; Johnson & Ershler, 1981).

Although the methodological problems might have affected the results of the present research in not suggesting any particular trend with age, the validity of the classification is still severely open to doubt. The reason is that Smilansky's proposal is not based on any scientific research findings. These appear to be a misinterpretation in its origination (Piaget, 1951; Buhler, 1935), as discussed in chapter seven. However, the findings of these studies on age trends are open to questions because of the limitation of the direct observational method already referred to.

It is suggested in chapter four that the requirements of a certain type of question in the child's mind stimulate an activity which is associated with certain types of verbalisation and social participation. It is also suggested that children choose the play material, suitable for their play activities. As a result, in some cases less social and verbal interaction is needed. For example: the child who was making cake and drink out of sand and water, may have played solitary for such reasons as:

a) she was the only child who was leaving the nursery at that particular day and there was no one else to share this experience with her. In other words in a social environment such as nursery school, if the theme or idea of play is limited to one player only and can not be shared with another player/s play occurs in solitory form;

b) flexible play material can be more autonomous, as a result of which the child can perform his/her idea more independently.

Should (a) be the case, it can be postulated that children's solitary-fantasy play might have resulted from the uniqueness of the play theme. In other words when a child can not share any experience or idea because it is

personal, s/he tends to play solitary. And in solitary play the likelihood of spontaneous verbalisation is minimised. It can therefore be suggested that fantasy emerges earlier than we expect, but with the lack of verbalisation it can not be evident. It however becomes overt as children grow older, and with the development of language it can be seen/heard. It is evident that children's pretend behaviour emerges during the first year of life for example drinking from an empty cup. Such examples which are decontextualised from real life are referred to as symbolic activities (Piaget, 1951), whereas banging is not regarded as symbolic activity. If the child's symbolisation with regard to language development emerges earlier, symbolic activity may follow similar stages.

Should (b) be the case, it would therefore be the type of play material which draws children into a certain type of social interaction. It appears from the interview data that this can not be the case, since children aim to perform a certain type of activity and other components such as: appropriate material, and the number of player/s are consequently decided.

With regard to the different types of play, Vygotsky limited play to symbolic activities; Piaget, Buhler, Valentine amongst others suggested functional play changes

to fantasy play; Smilansky hypothesised that during the course of development, functional play changes to constructive play, which in turn changes to fantasy play. Nevertheless, the results of the present research in both observational and interview data do show that there are certain types of activity which are purposeless. These are perhaps similar to what Piaget referred to as 'functional play'. It is evident in this thesis that even at the age of four functional activity still exists. Also the interview data suggest that there are certain types of bodily movements and engagements with or without objects which the child may demonstrate with no clear intention. It appears that all these types might exist, not necessarily as a different stage in the process of developmental change, but as different facets. However, the different facets of the child's behaviour including the private aspect, serves symbolic activities alongside other self-imposed rule activities. The public aspect of behaviour serves activities with public rules. There are also certain purposeless movements/activities outside of both systems which individuals may demonstrate at any time, which are not necessarily limited to the period of childhood. Each facet has to change, not from one type to another, but each evolving into a more complex level of its own kind. If this is the case then Smilansky's proposals of a hierarchical

system appear to be questionable. So, consequently, are studies within this framework.

The objective pattern of the developmental changes in terms of fantasy play may be a curvilinear as opposed to a linear pattern. Fantasy might exist from birth, not necessarily as the only type, but as one of the existing facets. It is covert at this stage, due to the fact that language is yet to be developed, since there is no evidence to suggest otherwise. With the development of language, it becomes overt and what Piaget referred to as 'loud thinking'. In this case children's fantasy can be heard/seen increasingly towards the age of 5-6, and then begins to become covert again due to the restriction and prohibition of the child's social environment and the development of the activities with public rules. However, fantasy and fantasising never dies out and remains in parallel with other activities throughout the life span. In this form of fantasy and day dreaming one sees fantasy in other people's actions like music, theatre, sport (Singer, 1974). In daydreaming, the individual's mind is active while there is no apparent movement in the body which can be referred to as symbolic activity. Vygotsky's model of language development may provide a clearer picture. In this model Vygotsky has emphasised the differentiation and

integration of the social-public, and the interiorised-private which occurs during the course of language development. According to Vygotsky the two components of personal and social in early speech, tend to be different in both structure and function. At first the child begins with both components. S/he utilises them for self-regulation, interiorisation and this develops into inner speech. Meanwhile, the public component of the speech remains socialised and external, developing from single words to sentences, used for communicating with others.

Similarly, the development of self-regulated action and its differentiation between 'action for one's self' and 'action for others', can be considered in parallel with language development. Thus early action may contain two major faces. It develops in various directions with different structures and functions. Play activity has as one of its faces the personal, individual and private component which includes 'fantasy' in parallel with other self-regulated, spontaneous, inner/covert behaviour. These behaviours have their own rules, regulated by the player/s. They develop in parallel with a more social component with arbitrary, and public rules. Fantasy however, like symbolisation, is private, personal, and at times needless of external end and external speech.

The development of games with rules does not

necessitate the decrease or death of fantasy. A decrease in frequency of fantasy may be due to such factors as: time and attention of the child which has to be divided between a number of activities, interest and responsibilities and most importantly the prohibition of the social environment. Therefore, as the child grows older fantasy may become covert again and remain so throughout the life-span in the form of day-dreaming. There may be a change in the individual's abilities to understand and apply the 'public rules'according to the circumstances. With ontogenic development, the structure of play must change, in order to serve the evolving and changing adaptive needs of the child. This adaptive requirement is a significant determinant in the period of childhood. Those who must adapt to a more social world require more play than those who do not. This also clarifies the relationship between play and phylogeny.

So far as the studies of social class differences are concerned, it might be the case that children from a middle class family start to play overt fantasy sooner than children with a working class background. This perhaps reflects the differences in their language development and not necessarily in their play behaviour. The restriction and prohibition of the social environment of the child

influences the language and thought of the child and consequently the pattern of behaviour. However, only future studies can answer these questions definitively.

Chapter seven examines the historical background of the category system with its origins as cited by Smilansky. The schemes suggested by Buhler, valentine, and Piaget, consist of three stages of functional, dramatic, and games with rules. 'Constructive activities' develop in parallel with dramatic play and games with rules, In Smilansky's classification, by contrast, constructive play is one stage between functional and dramatic play. The present research does not support the hierarchical validity of this classification scheme either through the analysis of the observational and longitudinal data, or by examination of the classification in terms of its origins.

In chapter eight of this thesis, the validity of the method of direct observation is examined. The results suggested quite large discrepencies between the observers' interpretations and the children's interpretations of the same actions. The observer's interpretation is based on her/his inferrences from the children's behaviour. The children's interpretations are based on what is going on in their minds while they are playing. Each method has its own

points of strength and weakness.

The method of direct and systematic observation has been an old method of research, with undeniable value. Nevertheless, with the development of symbolic representation during the period of chilhood, symbols tend to become more and more personal and internalised, making the observational data less and less reliable at least within this period. Consequently, it is suggested that talking to children in an appropriate manner may serve to either complement, or be an alternative to, direct observation when and if needed. This method like other methods of research has its own points of weakness and strength which may be improved when put into practice.

The major questions regarding this method of interviewing children are:

(i) How can we examine the coding reliability of this method?

(ii) How consistent are children in making statements about their actions?

iii) Are there any other interview method/s which should be considered?

These questions will be discussed in turn.

(i) Estimates of coding reliability may be obtained for interview data as follows:

children's play episodes may be videotaped in conjunction with interviewing them. A group of subjects may be presented with a clear definition of activities and be asked to score them on the transcription of the interview data. Reliability may be obtained by comparing the coding of the different individuals. Takhvar, Smith & Gore, 1985 used this method and reported significant agreement within the group. The main criticism of this study was that the definition of the types of play were somewhat ambiguous, and with clearer definitions one would expect better results.

(ii) Children's consistency in commenting on their own actions may be examined. Play episodes may be videotaped with interviews. A copy of the film without interview may be shown to the same children after an interval of 3-6 months, asking them to comment again on what they were doing. This procedure may be repeated several times. A comparison can be made and a measure of consistency can be obtained accross the interviews. This method is similar to that of measuring intra-observer consistency or reliability in observational studies. The investigator examined the method informally and only with one subject, as follows:

'J' was asked to comment on his painting. His painting consisted of a few patches of different coloured paint, all over a sheet of drawing paper. He explained: 'this is

grass' (green patch), 'this is an orange' (orange patch), 'this is a boy who is trying to get the orange' (blue patch), 'this is a man who tries to prevent the boy from getting the orange', (black patch); 'these are two airplanes protecting the boy from being captured' (pink and purple patches). The same child after three months was asked to comment on the same painting. His explanation was identical with the original. Six months later he was taken to an office where his painting was hung-up, with his mum and younger sister. As soon as we entered he recognised his painting and started to explain its contents for his younger sister. Once again he gave exactly the same explanation as before. This example suggests that children may have remarkable consistency in their interpretations. Nontheless, as only one instance, and not of symbolic play, it is not generalisable at all, but may be suggestive for further research.

(iii) Another alternative method to observation is to ask children at the same age to comment on each other's actions. Age of observer can be a major factor to consider in distinguishing play and its types. So far the observers who have decided on children's play categories have been from totally different age groups than the children they have observed. Children from the same age group might

produce a higher reliability amongst themselves. To examine this possibility, children's play episodes with interview could be recorded. A copy of the film without interview may be shown to different children of the same age and they could be asked to make their comments. Reliability may be obtained between and within the groups. The result will clarify the role of age in interpretations on children's actions.

The interview method may be criticised from the point of view of social desirability. Talking to children is not a new method. It is an old method, widely used in clinical settings. The major problem is that psychoanalysts and psychotherapists tend to be either over-analytical, or try to link the children's interpretation to some sources of abnormality or disorder. This expectation in terms of normal children and other settings does not exist. However, clinical studies never reported any problem related to the social desirability or unreliability on this method. Neverthless, it has been widely criticised by social psychologists, mainly interviewing adults, but not children.

There are some points of difference between the method of interviewing adults, compared with children.

Firstly, the term 'interview' does not appear quite

satisfactory. Talking to children and encouraging them to talk about the action which is in progress at the time with a familiar face, is not exactly the same as interview with adults.

Secondly, the common problem in any experiment with adult subjects is that they might manipulate and influence the results in one way or another. This might not be necessarily true in terms of children. If just the presence of an adult could be considered as the influential factor, this problem is also found in the method of direct observation.

Ethological studies do sometimes take advantage of children's verbal communication. One of the criteria for the observer distinguishing between dramatic play and other types of activities is spontaneous vocalisation. In the etic approach, this type of vocalisation has been regarded as objective and reliable because of its spontaneity, but in the emic approach vocalisation has been regarded as subjective and unreliable. For example: if the child takes a piece of lego, and moves it around without saying anything, the activity falls into the category of either functional or constructive play, depending on the overt complexity of the action. If he says 'this is my car' or makes the car noise, this action then falls into the dramatic play category which is considered to have much

more complexity. Indeed, if such play as the given example is some kind of covert fantasy which can not be seen or heard, the presence of noise or spontaneous vocalisation does not change the cognitive complexity of the activity.

In summary, the research reported in this thesis has led to a re-evaluation of the ways in which we classify play in preschool children. In part, this has resulted from a critique of Smilansky's hierarchical classification scheme. In part, it has resulted from pointing out the drawbacks of relying solely on observation of play by adult observers. Whatever the drawbacks of interview techniques, it is argued that they should be considered much more seriously in future studies of play, including research which will be necessary to produce a more valid and reliable scheme of classification.

SUMMARY

To the developmental study of children's play behaviour based on a longitudinal data, eight pre-school children, four boys and four girls age three to five years contributed. The study resulted from an interest in play, its content and development over a period of nine months.

A historical and theoretical review in the field of children's play, suggested reconsideration of the whole area. From the existing body of literature one is led to the conclusion that the findings in this area of research lack consistency across studies.

This can partly be addressed to the fact that 'play' has not yet been considered under its own right. A vast number of studies viewed play via other psychological and developmental factors.

It was felt that studying the play behaviour of children perhaps needed a different approach. Discussed in relation to this are: the number of variables included and the relationships between them; commitment of the investigator in observation time, with regard to the number of observations per session and also duration of the study;

and the use of complementary methods such as daily reports, or interviewing children. These considerations in the first place gave birth to the questions upon which the main body of the study was designed and have been dealt with throughout the first six chapters. The suitability of the method of observation and time sampling techniques with ten-second intervals cast no doubt and was employed. To examine the research questions 3000 data entries were recorded for each subject individually.

Studying children's play profile, tapped the target children's play preference and revealed variations in regard to the time spent in playing in various ways. This refers to the playfulness of children and emphasises the crucial role of adults and their interventions in children's play. Since children do not manage to occupy themselves equally well, the importance of 'free activity choice time' appears to be questionable whereas adults' intervention may be essential. Nevertheless, children refer to those activities appointed by adults as 'work'. Therefore the issue of adults' intervention in children's play tends to be quite a delicate matter and should be handled carefully.

Alternative to the role of adults in children's play, according to the data, is the role of 'intimate friend'. If

the intimate friend appears predominantly in a given activity, the liklihood of his influence in formation of play is high. It could also be suggested that grouping more playful children together with less playful ones encourages active play participation. This may be of great importance particularly for educational purposes, where indirect intervention by an adult is desired.

Another crucial point which can be outlined from children's play profiles is the importance of wide-spread information needed when dealing with children. One would need to invest effort and give consideration to various aspects of children's life. Such consideration may help the discovery of certain problems from which children may suffer at various stages. For example, gI who was labelled as a 'difficult child' and needed 'adults' attention' considerably, was found to be suffering from hard hearing at the time of her nursery education. This could have been the reason for being a 'difficult child'. Having discovered her problem earlier, might have reduced or put an end to the difficulties.

In a comparison between activities, those which could by definition fall into play categories have shown behavioural significance. As the data indicates in this

research, active participation in play activities do offer better opportunity for socialisation, verbalisation and complexity level. Further, children may be encouraged to improve their language and social skills through a particular type of play. This refers to the nature of activities by which certain possibilities may be facilitated. For example, according to the data, dramatic play is associated most often with social participation and verbalisation at high levels of complexity. This association moreover can be useful practically for educational, developmental, and psychological purposes. The conflict arises when one is not certain about the nature of the types of activities occurring during childhood. This may be addressed by future research findings. The uncertainty about identifying the nature of children's activities do not cast a serious doubt over the findings of this study, but the investigator would prefer to apply the results to those activities of children, which by their overt characteristics, fall into dramatic play or symbolic activity. It is already known that in a play situation children can substitute things for their own purposes in an 'as if' manner. These characteristics of pretend play allow those who are involved with children and their play in everyday life, to easily turn the nature of any type of activity to 'overt symbolic activity'. The type of play

material in a given activity would thus not be important whereas its flexibility is.

If social participation correlates with cognitive play, what is thus claimed by a number of previous investigations concerned with social class differences may be doubtful. Since the overall pattern is confused, the findings accross studies which used the same categories (Parten and Smilansky) lack consistency. Moreover, previous research findings cast doubt upon the hierarchical validity of both classifications (Smith, 1978; Rubin and Krasnor, 1980. See also chapter six in this study)

Finally, the observational data was examined for developmental changes. In each individual case the 3000 data entries were divided into five time points. Each time point represents a ten-day observation or 600 data entries. When the developmental changes were examined, the results suggested strong variation across the target chidren. Further analysis in terms of overall pattern did not suggest a linear pattern and led the investigator to further question: the validity of the play classification used and also the reliability of the method of observation.

Identifying the nature of children's activities solely through the method of observation is impractical. Moreover

the classification suggested by Smilansky and its hierarchical nature is not applicable to children's play. So far as the results of this study are concerned, individual children have shown variations in respect of the developmental changes in the patterns of their play behaviour. With regard to cognitive play, the study failed to support the emergence of 'constructive play' as occurring after 'functional play, but before 'dramatic play'.

The findings in this aspect of the present research emphasise the importance of play, its definition and classification. In terms of social play and its developmental changes, no particular pattern could be inferred, but it can be decided that in a social environment, either the cognitive form of play may dictate a particular form of social participation, or it may be due to the individual preferences. Similarly, changes in dramatic play episodes do not support the previous research findings in this respect. Lack of support for the expected developmental changes in dramatic play in this study, comparing to what is claimed by the previous investigators, was decided to be due to the weakness of the method of observation. In terms of cognitive play categories, the decision was made on the examination of the categories.

Summary

To examine the validity of the classification system devised by Smilansky, its origins were checked. It was found that this scheme is not based on secure research findings. In spite of its popularity its validity has never been questioned before. The present study however, did not support the hierarchical nature of Smilansky's scheme. Also it conflicts with a vast number of developmental research findings in the field of children's play which are discussed in detail in chapters four and five.

Methodologically also, the investigator has come across episodes in which it seems that children's interpretation is different from that of the observer/s. This however, can not be discovered through studies based on observational data solely, but other methods can be employed either in conjunction with the existing methods or on their own. The present study leads to the fact that although the method of observation appeared to be the most suitable method in the first place, talking to children enables us to tap such unknown areas of play behaviour as : the extent to which children agree with the observer/experimenter(s) in their decision making when studying children's play behaviour; and the relationships between overt and covert behaviour of children. In other words the relationships between, what an action is meant to be from the children's points of view,

with what it appears to be from the observer/experimenter's point of view.

As a future plan, the findings from this kind of approach has drawn the attention and the interest of the investigator to the problems of play classification and definition, in which children themselves should be given the chance of expressing their own views.

REFERENCES

Altmann, J.: Observational study of behaviour: sampling methods. Behaviour 49, 227-265, 1974.

Arrington, R.E.: Time sampling in studies of social behavior: a review of techniques and results with research suggestions. Psychological Bulletin. 40, 81-124, 1943.

Arrington, R.E.: Time Sampling Studies of Child behaviour. Psychological Monographs, 51, 1939.

Barker, M.: A technique for studying the social material activities of young children. Child Development Mongraphs. 3, New York, Columbia University Press, 1930.

Bateson, G.: A theory of play and fantasy. Psychiatric Research Reports 2, 39-51, 1955.

Bateson, G.: The message 'This is play'. In B. Schaffner (Ed.), Group Processes. New York: Josiah Macy, 1956.

References

Berlyne, D.E.: Conflict, arousal and curiousity. New York: McGraw Hill, 1960.

Berlyne, D.E.: Curiosity and exploration. Science, 153, 25-33, 1966.

Bjorklund, C.: The effects of toy quantity and qualitative category on toddlers' play. Paper presented at biennial meeting of the Society for Research in Child Development, San Francisco, March,1979.

Blurton Jones, N.G.: Categories of child-child interaction. In N.G.Blurton Jones(Ed.), Ethological studies of child behaviour. Cambridge, England: Cambridge University press, 1972.

Bruner, J.S.:Nature and uses of immaturity. American Psychologist, 27,678-708, 1972.

Bruner, J.S., Jolly, A., & Sylva, K. (Eds.), Play: Its role in development and evolution. New York: Penguin, 1976.

Buhler, C.:From Birth to Maturity. London: Kegan Paul, 1935.

References

Buhler, C.: The Mental Development of the Child. London: Kegan Paul, 1937.

Carpenter, C.: Relation of children's sex-typed behaviour to classroom and activity structure. Paper presented at biennial meeting of the Society for Research in Child Development, San Francisco, March, 1979.

Chaille, C.: The child's conceptions of play, pretending and toys: A developmental study of the concepts of symbolic play of 5 to 11 year old children. Unpublished Ph.D. thesis, University of California, Los Angeles, 1977.

Cockrell, D.L.: A study of the play of children of pre-school age by an unobserved observer. Genet. Psychol. Monogr, 17: 377-469, 1935.

Connolly, K.J.: Ethological Techniques and the Direct Observation of Behaviour. In P. Mittler (Ed.), Assessment for Learning in the Mentally Handicapped. London: Churchill Livingstone, 1973.

References

Crawley, S.B., Rogers, P., Friedman, S., Richardson, L., & Thompson, M.: Developmental changes in the structure of mother-infant play. Developmental Psychology, 14, 30-36, 1978.

Dansky, J.L.:The cognitive function of sociodramatic play. Unpublished PhD. Thesis, Bowling Green, state university. 1975.

Dansky, J.L.: Cognitive consequences of sociodramatic play and exploration training for economically disadvantaged preschoolers. Journal of Child Psychology and Psychiatry, 20, 47-58, 1979.

Dansky, J.L.: Make believe: a mediator of the relationship between play and associative fluency. Child Development, 51, 576-579, 1980.

Dansky, J.L., & Silverman, I.W.: Effects of play on associative fluency in preschool-aged children. Developmental Psychology, 9, 38-43, 1973.

Dansky, J.L. & Silverman, I.W.: Play: A general facilitator of associative fluency. Developmental Psychology, 11, 104, 1975.

References

Darwin, C.R.: The expression of emotions in man and animals. London: John Murray, 1872.

Dewey, J.: Art as experience. Allen & Unwin. London. 1934.

Dixon, D. Saltz, E & Johnson, J.: Training disadvantaged preschoolers on various fantasy activities: Effects on cognitive functioning and impulse control. Child Development, 48, 366-379, 1977.

DiPietro, J.: Rough and tumble play: A function of gender. Developmental Psychology, 17, 50-58, 1981.

Eckerman, C.O., & Whatley, J.L.: Toys and social interaction between infant peers. Child Development, 48, 1645-1656, 1977.

Elder, J. & Pederson, D.: Preschool children's use of objects in symbolic play. Child Development, 49, 500-504, 1978.

References

El'konin, D.B.: Some results of the study of the psychological development of preschool-age children. In M. Cole & I. Maltzman (Eds.), A Handbook of Contemporary Soviet Psychology. New York: Basic Books, 1968.

Ellis, M.J.: Why people play. Englewood cliffs: Prentice Hall, 1973.

Erikson, E.H.: Studies in the interpretation of play distribution in young children. Genetic Psychology Monographs, 22, 557-671, 1940.

Erikson, E.H.: Childhood and society. New York. W.W. Norton, 1963.

Erikson, E.H.: Toys and reasons. New York. W.W. Norton, 1977.

Fein, G.:A transformational analysis of pretend play. Developmental Psychology, 11, 390-395, 1975.

References

Fein, G.: Play and the acquisition of symbols. In L. Katz (Ed), Current Topics in Early Childhood Education. Norwood, N.J.: Ablex, 1979.

Fein. G.: Pretend play: An integrative review. Child Development, 1095-1118, 1981.

Feitelson, W., & Ross, G.S.: The neglected factor - play. Human Development, 16, 202-203, 1973.

Fenson, L., & Ramsay, D.: Decentration and integration of the child's play in the second year. Child Development, 51, 171-178, 1980.

Freyberg, J.: Increasing the imaginative play of urban disadvantaged kindergarten children through systematic training. In J.L. Singer(Ed.), The child's world of make-believe. New York: Academic Press, 1973.

Garvey, C.: Some properties of social play. Merrill-Palmer Quarterly, 20, 163-180, 1974.

References

Garvey, C.: Play. Cambridge, Mass: Harvard University Press, 1977.

Garvey, C.: Play with language, In B. Tizard & D. Harvey(Eds.), Biology of play, Philadelphia, Lippincott, 1977.

Goldman. B & Ross. H: Social skill in action : An analysis of early peer games. In J. A. Glick and K.A. Clark-Stewart (Eds), Studies in Social and Cognitive Development vol.1: The Development of Social Understanding. New York: Gardner Press, 1978.

Golomb, C.: Symbolic play: The role of substitutions in pretense and puzzle games. British Journal of Educational Psychology, 47, 175-186, 1977.

Gower, J.: Structural elements of symbolic play of preschool children. Paper presented at annual meeting of the American Educational Research Association, Toronto, August, 1978.

Gramza, A.F.: Responses to the manipulability of a play object. Psychological Reports, 38, 1109-1110, 1976.

References

Geertz, C.: Deep play: Notes on the Balinese cockfight. Daedalus, 101, 1-38, 1972.

Groos, K.: The play of animals. New York : Appleton, 1898.

Groos, K.: The play of man. New York: Appleton, 1901.

Hall, G.S.: Youth. New York: D. Appleton, 1920.

Hawkins, D.: The language of nature. San Francisco: Freeman, 1964.

Hendrick, J.: The Whole Child: New Trends in Early Education. St. Louis: C V. Mosby, 1975.

Hetherington, E.M., Cox, M. & Cox, R.: Play and social interaction in children following divorce. Journal of Social Issues, 35, 26-49, 1979.

Hoving, L., Laforme, G.L., & Wallace, J.R.: The development of interpersonal aggression in a competitive task. In J. de Wit and W.W. Hartup (Eds.), Determinants and Origins of Aggressive Behaviour. The Hague: Mouton, 1974.

References

Hughes, M., & Hutt, C.: Heart-rate correlates of childhood activities: Play, exploration, problem solving and day-dreaming. Biological Psychology, 8, 253-264, 1979.

Hull, C.L.: Principles of behavior. New Haven, Conn.: Yale Univesity Press, 1952.

Hutt, C., & Hutt, J.S.: Heart rate variability - the adaptive consequences of individual differences and state changes. In: V. Reynolds & N. Blurton Jones, (Eds). Human Behaviour and Adaptation. London : Taylor & Francis Ltd, 1978.

Hutt, C.: Play in the under fives: Form, development and function. In Modern Perspectives in the Psychiatry of Infancy, Howells, J. G. New York: Brunner/Mazel, 1979.

Hutt, C.: Specific and diverse exploration. In H. Reese & L. Lipsett (Eds.), Advances in child development and behavior. New York: Academic Press, 1970.

Hutt, C.: Exploration and play in children. Symposium of the Zoological Society of London, 18, 61-81, 1966.

References

Huttenlocher, J., & Higgins, E.T.: Issues in the study of symbolic development. In W.A. Collins (Eds.), Minnesota Symposia on Child Psychology. New Jersey: Erlbaum, 1978.

Isaacs, S.: Development in young children: A study of beginings. London: Routledge and Kegan Paul, 1933.

Isaacs, S.: Intellectual Growth in children. London: Routledge and Kegan Paul, 1935.

Jacklin, C., & Maccoby, E.: Social behaviour at thirty three months in same-sex dyads. Child Development, 49, 557-569, 1978.

Janeway, E.: Man's world, woman's place. New York: Morrow, 1971.

Johnson, J.E., Ershler, J. & Lawton, J.: Intellective correlatives of preschoolers' spontaneous play. Journal of General Psychology, 106, 115-122, 1982.

References

Johnson, J.E. & Ershler, J.: Developmental trends in pre-school play as a function of child gender and classroom setting. Paper presented at the Annual meeting of the Association for the Anthropological Study of Play, Ann Arbor, April 1980.

Kalverboer, A.F.: Measurment of play: clinical applications. In B.Tizard & D.Harvey(Eds.), Biology of play. London: William Heinemann, 1977.

King, N.R.: Play: The kindergartner's perspective. The Elementary School Journal, 80, 81-87, 1979.

Klinger, E.: The structure and functions of fantasy. New York: Wiley-Interscience, 1971.

Klein, M.: The psychoanalysis of children. London: Hogarth, 1932.

Klein, M.: The psychoanalytic technique. American Journal of Orthopsychiatry, 25, 223-237, 1955.

References

Krasnor, L.R., & Pepler, D.J.: The study of children's play: Some suggested future directions. In K. Rubin (Ed.), Children's Play. New Directions for Child Development, Number 9, 1980.

Lazarus, M.: Die reize des spiels. Berlin: Fred. Dummlers Verlagsbuchhandlung, 1883.

Liberman, A.F.: Preschoolers competence with a peer: Influence of attachment and social experience. Child Development, 48, 1277-1287, 1977.

Lovinger, S.L.: Sociodramatic play and language development in preschool disadvantaged children. Psychology in the Schools, 11, 313-320, 1977.

Lowe, M.: Trends in the development of representational play in infants from one to three years: An observational study. Journal of Child Psychology and Psychiatry, 16, 33-47, 1976.

Marshall, H. & Hahn, S. C.: Experimental modification of dramatic play. Journal of Personality and Social Psychology, 5, 119-122, 1967.

References

Martin, P.: The energy cost of play: An estimation. Animal Behaviour, 30, 293-301, 1982.

Miller, S.N.: Ends, means and galumphing: Some leitmotifs of play. American Anthropologist, 75, 87-98, 1973.

Matthews, W.S.: Modes of transformation in the initiation of fantasy play. Developmental Psychology, 13, 212-216, 1977.

Mueller, E. & Lucas, T.: A developmental analysis of peer interaction among toddlers. In M. Lewis & L. Rosenblum(Eds.), Peer relation and friendship. New York: Wiley, 1975.

Mueller, E. & Brenner, J.: The origins of social skill among play group toddlers. Child Development, 48, 854-861, 1977.

McGrew, W.C.: An ethological study of children's behaviour. London: Academic Press, 1972.

References

Nicolich, L. M.: Beyond sensorimotor intelligence: Assesment of symbolic maturity through analysis of pretend play. Merrill-Palmer Quarterly, 23, 89-99, 1977.

Nicolich, L. M.: Towards Symbolic Functioning: Structure of Early Pretend Games and Potential Parallels. Child Development, 52, 785-797, 1981.

Olson, W.C.: The measurement of nervous habits in normal children. Inst. Child Welfare Monogr. No 3. Minneapolis, U. of Minn., 1929.

Overton, W.F. & Jackson, J.P.: Pretending play action sequences. Child Development, 44, 308-315, 1973.

Parten, M.B.: Social participation among preschool children. Journal of Abnormal Psychology, 27, 243-269, 1932.

Patrick, G.T.W.: The psychology of relaxation. Boston: Houghton - Mifflin, 1916.

Pellegrini, A.D.: Development of preschoolers social-cognitive play behaviors. Perceptual and Motor Skills, 55, 1109-1110, 1982.

References

Peller, L.E.: Models of children's play. Mental Hygiene, 36, 66-83, 1952.

Peller, L.E.: Libidinal phase, ego development and play. Psychoanalytic Study of the Child, 9, 178-198, 1954.

Pepler, D.J.: The effects of play on convergent and divergent problem solving. Unpublished doctoral dissertation, University of Waterloo, 1979.

Piaget, J.: The Psychology of Intelligence. Totowa, N.J.: Littlefield, Adams, 1960.

Piaget, J.: Play, Dreams, and Imitation in children. New York: Norton, 1962.

Putallaz, M. & Gottman, J.: Social skills and group acceptance. In S. Asher and J. Gottman (Eds.), The Development of Friendship: Description and Intervention. New York: Cambridge University Press, 1981.

References

Reynolds, P.: Play, language and evolution. Paper presented at the Annual Meeting of the American Association for the Advancement of Science, Washington D.C., December 1972.

Roper, F. & Hinde, R.A.: Social behaviour in a play group: Consistency and complexity. Child Development, 49, 570-579, 1978.

Rosen, C. E.: The effects of sociodramatic play on problem-solving behaviour among culturally disadvantaged children. Child Development, 45, 920-927, 1974.

Rosenblatt, D.: Developmental trends in infant play. In B. Tizard & D. Harvey (Eds.), The biology of play. Philadelphia: Lippincott, 1977.

Rubin, K.H.: The social and cognitive value of preschool toys and activities. Canadian Journal of Behavioural Science, 9, 382-385, 1977.

References

Rubin, K.H.: Fantasy play: Its role in the development of social skills and social cognition. In K. Rubin (Eds.), Children's Play: New Directions for Child Development, 9, 1980.

Rubin, K.H.: Non-social play in preschoolers: Necessarily evil? Child Development, 53, 651-657, 1982.

Rubin, K.H., Fein, G., & Vandenberg, B.: Play. In P. H. Mussen and E. Hetherington (Eds.), Handbook of child psychology (4th ed.) New York: Wiley, 1983.

Rubin, K.H., & Krasnor, L.R.,: Changes in the play behaviours of preschoolers: A short term longitudinal investigation. Canadian Journal of Behavioural Science, 12, 278-282, 1980.

Rubin, K.H.: The social and cognitive value of preschool toys and activities. Canadian Journal of Behavioural Science, 9, 382-385, 1977.

References

Rubin, K.H. & Maioni, T.: Play preference and its relationship to egocentrism, popularity and classification skills in preschoolers. Merrill-palmer Quarterly, 21, 171-179, 1975.

Rubin, K.H., Maioni, T.L. & Hornung, M.: Free play behaviour in middle- and lower-class preschoolers: Parten and Piaget revisited. Child Development, 47, 414-419, 1976.

Rubin, K.H. & Seible, C.: The effects of ecological settings on the cognitive and social play behaviours of preschoolers. Paper presented at Annual Meeting of the American Educational Research Association, San Francisco, April 1979.

Saltz, E., & Johnson, J.: Training for thematic-fantasy play in culturally disadvantaged children: Preliminary results. Journal of Educational Psychology, 66, 623-630, 1974.

Schiller, F.: Letters on the Aesthetic Education of Man. Yale University Press, New Haven 1954.

References

Schwartzman, H.B.: Children's play: A side ways glance at make-believe. In D.F.Lancy & B.A. Tindall (Eds,). The Anthropological Study of Play: Problem and Prospects. Cornwall, N.Y.: Leisure Press, 1976.

Schwartzman, H.B.: Transformations: The anthropology of play. New York: Plenum, 1978.

Schwatrzman, H.B.: The anthropological study of children's play. Annual Review of Anthropology, 5, 289-328, 1976.

Sherif, C.W.: Bias in psychology. In J.A.Beck (Eds.), The prism of sex. Madison, Wisconsin: University of Wisconsin Press, 1979.

Simon, T. & Smith, P.K.: The study of play and problem-solving in preschool children: Have experimenter effects been responsible for previous results? British Journal of Developmental Psychology, 1, 289-297, 1983.

Singer, J.L. (Ed.),: The child's world of make-believe: Experimental studies of imaginative play. New York: Academic press, 1973.

References

Singer, J.L., & Singer, D.G.: Imaginative play and pretending in early childhood. In A. Davids (Ed.), Child personality and psychology. New York: Wiley. 1976.

Singer, J.L., Siger, D.G. & Sherrod, L.R: A factor analytic study of preschoolers' play behavior. American Psychology Bulletin, 2, 143-156, 1930

Smilansky, S.: The effects of sociodramatic play on disadvantaged preschool children. John Wiley & Sons. New York, 1968.

Smith, P.K, & Dagleish, L.: Sex differences in infant and parent behavior. Child Development, 48, 1250-1254, 1977.

Smith, P.K., Dalgleish, M. and Herzmark, G.: A comparison of the effects of fantasy play tutoring and skills tutoring in nursery classes. International Journal of Behavioural Development, 4, 421-441, 1981.

References

Smith, P. K.: A longitudinal study of social participation in preschool children: Solitary and parallel play re-examined. Developmental Psychology, 14, 517-523, 1978.

Smith, P.K., & Syddall, S.: Play and non-play tutoring in preschool children: Is it play or tutoring which matters? British Journal of Educational Psychology, 48, 315-325, 1978.

Smith, P.K., & Dutton, S.: Play and training in direct and innovative problem solving. Child Development, 50, 830-838, 1979.

Smith, P. K.: Play and its role in education. Educational Analysis, 2, 14-24, 1980.

Smith, P.K., & Connolly, K.J.: The ecology of preschool behaviour. Cambridge University Press, Cambridge, 1980.

Smith, P.K., & Connolly, K.J.: Patterns of play and social interaction in preschool children. In N. Blurton Jones(Ed.), Ethological studies of child behaviour. Cambridge: Cambridge University press, 1972.

References

Smith, P.K., Takhvar, M., Gore, N. & Vollstedt, R.: Play in young children: Problems of definition, categorisation and measurement. Early Child Development & Care, 9, 25-41, 1985.

Smith, P.K., & Vollstedt, R.: On defining play: An empirical study of the relationship between play, and various play criteria. Child Development, 56, 1042-1050, 1985.

Smith, P.K.: Does play matter? Functional and evolutionary aspects of animal and human play. Behavioral and Brain Sciences, 5, 139-184, 1982.

Spencer, H.: Psychological principles. New York: Appleton, 1873.

Sponseller, D., and Jaworski, A.: Social and cognitive Complexity in young children's play: A longitudinal analysis. Paper presented at Annual Meeting of the American Educational Research Association, San Francisco, April 1979.

Sutton-Smith, B.: Piaget on play: A critique. Psychological Review, 73, 104-110, 1966.

References

Sutton-Smith, B.: The role of play in cognitive development. Young Children, 22, 361-370, 1967.

Sutton-Smith, B.: Current research and theory on play, games and sports. In T. Craig, (ed.), The humanistic and mental health aspects of sports, exercise and recreation. Chicago: American Medical Association, 1976.

Sutton-Smith, B.: Die dialektik des spiele. Schorndorf: Verlag Karl Hoffman, 1978.

Sutton-Smith, B.: Children's play: Some sources of play theorizing. In K. Rubin (Ed.), Children's Play: New Directions for Child Development, 9, 1980.

Sylva, K.: Play and learning. In B. Tizard and D. Harvey (eds.), The Biology of Play. London: SIMP/Heinemann, 1977.

Sylva, K., Bruner, J., & Genova,P.: The rule of play in the problem-solving of children 3-5 years old. In J. Bruner, A. Jolly & K. Sylva (Eds.), Play-Its role in development and evolution. New York: Penguin, 1976.

References

Takhvar, M., Gore, N. & Smith, P.K.: The categorisation of play behaviour. Do observers underestimate fantasy play?. Poster presented to B.P.S. Developmental Section Conference, Lancaster, 1984.

Tizard, B.:Play and learning. In B. Tizard & D. Harvey (eds,). Biology of play. London: SIMP/Heineman, 1977.

Turner, C.W. & Goldsmith, D.: Effects of toy guns and airplanes on children's anti-social free play behavior. Journal of Experimental Child Psychology, 21, 303-315, 1976.

Vandenberg, B.: Play and development from an ethological perspective. American Psychologist, 33, 724-738, 1978.

Vandenberg, B.: Play, problem-solving and creativity. In K.H. Rubin (Ed.), Children's play: New directions for child development. San Francisco: Jossey Bass, No. 9, 1980.

Vandenberg, B.: The role of play in the development of insightful tool-using strategies. Merrill-Palmer Quarterly, 27, 97-109, 1981.

References

Van Hooff, J.A.R.A.M.: A comparative approach to the phylogeny of laughter and smiling. In R.A. Hinde (Ed.), Non-verbal communication. Cambridge, England: Cambridge University Press, 1972.

Valentine, C. W.: The Psychology of Early Childhood. London: Methuen, 1942.

Vygotsky, L.S.: Thought and Speech. In S. Saporta, and J. R. Bastian (Eds.), Psycholinguistics. New York: Holt, Rinehart & Winston, 1961.

Vygotsky, L.S.: Play and its role in the mental development of the child. Soviet Psychology, 12, 62-76, 1967.

Vygotsky, L.S.: Mind in society: The development of higher mental processes. Cambridge, Mass: Harvard University Press, 1978.

Watson, M.W., & Fischer, K.W.: A developmental sequence of agent use in late infancy. Child Development, 48, 828-836, 1977.

References

Watson, M.W., & Fischer, K.W.: Development of social roles in elicited and spontaneous behaviour during the preschool years. Developmental Psychology. 16, 483-494, 1980.

Weisler, A, & McCall, R.: Exploration and play. American Psychologist, 31, 492-508, 1976.

Zamarelli, J. & Bolton, N.: The effect of play on mathematical concept formation. British Journal of Educational Psychology, 47, 155-161, 1977.

Appendix A

PLAY PARTNER	ACTIVITY	OBJECT	FANTASY	VERBAL	COMMENTS

Appendix B

NAME DATE

MAJOR EVENTS?
(birth, death,
wedding, illness)

VISITS?
(Cinema, park,
shops, relatives)

PLAY PARTNERS?
(friends from nursery,
neighbourhood)

PURCHASES?
(new toys,
clothes)

ARGUMENTS or
DISCIPLINE PROBLEMS?

OTHER EVENTS

Appendix C

The amount of each type of activity, for one child, over 50 sessions.

Total No Play = 1058
Total Transition = 295
Total Functional = 360
Total Constructive = 969
Total Games = 0

Day	Types of Activity					
	No Play	Trans	Funct	Const	Fanst	Games
1	11	0	0	49	0	0
2	30	5	7	7	11	0
3	12	7	5	19	17	0
4	24	4	7	0	25	0
5	8	14	9	0	29	0
6	25	2	14	1	18	0
7	22	5	7	1	25	0
8	34	0	8	18	0	0
9	41	4	7	0	8	0
10	18	7	2	33	0	0
11	7	2	11	22	18	0
12	25	1	5	4	25	0
13	40	0	3	1	16	0
14	33	3	6	0	18	0
15	23	0	23	0	14	0
16	24	3	5	28	0	0
17	38	1	15	5	1	0
18	39	4	5	11	1	0
19	11	0	27	22	0	0
20	4	14	8	34	0	0
21	41	1	14	4	0	0
22	15	2	18	25	0	0
23	25	6	16	13	0	0
24	13	6	0	41	0	0
25	11	10	7	31	1	0
26	44	0	8	8	0	0
27	7	0	11	39	3	0
28	27	15	7	11	0	0
29	13	6	0	41	0	0
30	27	15	7	11	0	0
31	49	6	1	4	0	0
32	44	0	0	0	16	0
33	19	0	13	28	0	0
34	0	0	19	41	0	0
35	8	26	7	19	0	0
36	12	5	6	37	0	0
37	35	8	8	9	0	0
38	42	4	7	7	0	0
39	20	14	5	21	0	0
40	8	26	7	19	0	0
41	5	15	0	40	0	0
42	10	14	0	36	0	0
43	27	3	1	29	0	0
44	13	2	0	45	0	0
45	14	3	2	41	0	0
46	15	2	4	39	0	0
47	4	15	6	20	14	0
48	7	0	3	30	20	0
49	25	0	5	0	30	0
50	9	14	4	25	8	0

Appendix D

In this appendix such information as: teacher's assessment and mother's statement with regard to the analysis in Chapter Three will be followed.

gI

Teacher's Assessment.

She is quite a difficult child to describe or assess. She is popular and sociable. She enjoys playing in close proximity to adults and talking to them mainly about happenings at home.

Mother's Statement.

She is very articulate but rather babyish. She needs too much attention, and she tries her best to seek it. She has practically made life rather difficult for me as I don't have much time for myself.

Investigator's Notes.

Playing with her mate/s she was rather passive. She enjoyed being looked after. When taking a role she would

choose to be the baby. She was the child of a second marriage. Her mother had divorced her first husband because of his being too old and because of an addiction. As a result she managed to get a fairly big house and a considerable amount of money for the maintenance of their son. According to her he was wealthy but unable to satisfy her needs. She said, that she started having an affair with a young man, became pregnant and broke the first marriage. She did not seem to be very happy in her second marriage, particularly in regard to the target child. She described her as a rather difficult child who was disruptive and who could keep her busy all the time. She also referred to her husband as not very responsive. During the following year, after she had left the nursery, it was learnt that gI had been suffering from difficulties in hearing for quite a long time and was found to have a loss of hearing in one ear. This could account for some apparent lapses in concentration.

gII

Teacher's assessment.

She is a very lively, out-going and highly intelligent child. When she first started she was a solitary child but gradually she came out and played more with other children.

appendix D

Mother's Statement.

She is a solitary child but rather premature for her age. That is probably my own fault because I do not like her to mix with many children. There are lots of complications within the family basically in connection with my studies. We are originally Polish (my mother and I) but my husband is English. My mother came to England because of me. She has no relatives to go to. Besides that she is a great help at home. In fact she looks after my children and helps with the housework while I am away. It is rather unfortunate that there has not been a good relationship between my mother and my husband. This matter has influenced my marriage and has been deteriorating since I have started going to the university. In a family of five, my mother, my daughter and I are living together, while the boy and my husband live together in the same house.

Investigator's Notes.

She was very keen in playing 'house'. Her fantasy was almost always pretending to be the 'mummy'. She would cook, set the table and serve her imaginary companions. She was very neat, clean and very well organised. Her work in clay and handicrafts were always well and neatly done. She was

creative and especially enjoyed telling jokes. According to her daily reports she was spending a considerable time at home reading. She was living with her grandmother as a result of her mother being a student. She was very fond of her 'nan-nan' this could be inferred from her drawings and paintings in which she was shown, doing different things. In her drawings she depicted her grandmother several times, showing her gardening, picking flowers and arranging them. There was a great deal of purchasing of reading material in her life outside the nursery.

gIII

Teacher's Assessment.

She was very shy and dependent on her mother when she started the nursery school. After initially settling down she became anxious again so her mother cooperated once more in settling her in. She has gradually become confident and sociable.

Mother's Statement.

She is a jealous girl, very much affected by the new baby. Since the baby was born she has been reluctant to come to the nursery. She is very shy and I try my best to help her recover.

appendix D

Investigator's Notes.

When taking a role in dramatic play she would volunteer to be a 'baby'. She was having the experience of being in another peer group parallel to that of nursery school as she was in a beginner's class at the ice skating rink. She had a habit of nail biting. She appeared to enjoy helping the teacher, setting the table and collecting the things, tidying up etc., more than playing with her classmates. Compared with others she stayed in the nursery only a brief time. Due to a mistake in regard to her date of birth, she left the nursery 6 weeks earlier than expected and started infant school.

gIV

Teacher's Assessment.

She is an intelligent but sensitive child who seems to be suffering in a confused way from the breakdown of her parents' marriage. She is articulate.

Mother's Statement.

She is suffering at the moment. My husband and I are in the process of divorce. I have got the custody of our children and my husband has access for a full day and is

entitled to take them out once a week as well. My marriage was a great mistake. My husband is much older than me and he is an alcholic. I feel really worried while he has the children with him. My daughter is particularly anxious at the moment.

Investigator's Notes

She was rather a solitary child. She spent hours playing alone and talking to herself, crying very often quietly while lying on the floor. According to her daily report almost every night she had a friend to stay with her, either from the nursery or one of her relatives. Lots of new things were bought for her. gIV was living with her younger sister, mother and grand parents. The mother seemed to be coping well. She was in her early twenties. The child's daily life appeared to be eventful - lots of visits (parks, friends) were arranged.

Teacher's Assessment.

He is intelligent, very sociable and also very imaginative. He is extremely articulate and very good at expressing himself. He gradually became a close friend to bII and had difficulty mixing with other children when bII was absent from the nursery.

Mother's Statement.

My children (the target boy and his sister) are extremely imaginative, particularly my son. He always lives in dreamland. You never know where you are with him in reality. He is very interested in judo and karate. He is not aggressive but he is fighting all the time.

Investigator's Notes.

He had a car which he used to carry with him all the time. He was fighting, if not with his mates, with his imaginary partner or adults whom he came across. This included shooting and killing imaginary people. He could fashion a machine gun out of anything in order to kill 'every one'. His mother started working while he was at the nursery. Interestingly enough, immediately after this event

in certain drawings of his family he omitted his mother by covering her up with a little paint. In another drawing he drew his granddad shaving. In his clay work once he made an ashtray for his grandfather who was supposed to be arriving the following weekend. The granddad was smoking too much and 'nobody could breathe properly', he said, and described how much his mother hated him because of his smoking.

bII

Teacher's Assessment.

He is reasonably bright and highly motivated. He comes from a very happy family with a loving and stimulating home. He can easily become over excited.

Mother's Statement.

He is shy. He had the experience of play group before starting nursery but he was always reluctant to attend. We practically have no discipline problems with him. He is very kind to his younger sister. He seems to be closer to his father.

Investigator's Notes.

His mother is very conscious of the importance of early intellectual development. There was much stimulation at

home. His daily reports suggest that there were not many quiet and uneventful days. When engaged in constructive play he would retain a mental background of fantasy. For example, he enjoyed being a taxi driver or a policeman whilst carrying out different types of constructive and creative play activities. As one particular instance, he kept a police hat on for quite a considerable period after his home was broken into. He had not witnessed anything himself but had heard the modified story later on. In fact he did not play anything to do with burglary itself but he kept the police hat on. Again, on one occasion their car broke down and his father fetched him from the nursery in a taxi; he afterwards played being a taxi driver several times, selling tickets to the passengers (his playmates). He would keep a hat on, either as a police man or a taxi driver without really relating the context of his play to those roles but declaring 'I am a policeman' or 'I am a taxi driver' on and off. He had one close friend and he was quite reluctant to attend the nursery when he was away. They played together not only during nursery hours but also at home. Their parents as a result had become close friends.

bIII

Teacher's assessment.

He is intelligent and imaginative. He is a very close friend of Ed but in Ed's absence he can happily and easily cope and play with other children. He seems to have been indulged very much at home.

Mother's Statement.

He is a happy and relaxed child. He does not enjoy mixing with adults. He is rather peer group oriented. He has to have some friend of his around most of the time, otherwise he would feel bored and keep nagging all the time.

Investigator's Notes.

He was a very calm and relaxed child. He was very cheerful and kept smiling most of the time. He enjoyed joking very much. He kept to a normal daily routine. He had bought a spiderman and kept wearing it for a cosiderable period but the context of his imaginative play did not relate to his outfit. He preferred constructional toys, the lego set in particular.

appendix D

bIV

Teacher's Assessment.

He is remarkably bright, quite confident and active. He is very popular and his spoken English is advanced and impressive.

Mother's Statement.

We are rather concerned about his education. My son is very intelligent and ahead of his age-mates. We don't want him to play with other children, even his cousin who lives with us, because that is not educative. His father and I have enough time to spare to play with him and teach him whatever we want through play. Moreover we want him to be responsible whereas in playing with children he cannot learn this. Besides there are no 'good children' around. So we tend to play with him ourselves.

Investigator's Notes.

He was articulate, active, and interested in playing with vehicles very much. He was one of those children who could be described as a fantasy player. His fantasy was mainly to be a taxi driver or a shopkeeper or else he would organise a supermarket or snackbar. He was good at creating an imaginary spaceship to take his imaginary passenger to the moon.

According to his daily reports his playmates at home were limited to his parents. This had also been confirmed

by his mother. His father owned a small supermarket and a snackbar. For a reason which did not become clear they decided to sell the business. The child repeatedly played shops, setting up a supermarket, telling everyone that he had decided to sell the business, telephoning to different places, talking to his imaginary partner/s in connection with selling his business and taking his playmates round the supermarket. He was telling children how successful the business was. After his father sold the supermarket, he (the father) bought a taxi and became a taxi driver. From then on the boy changed his fantasy to being a taxi driver while he used to come back to the supermarket play every now and then. He could easily occupy himself with anything and everything. In the absence of an appropriate toy, he would build a spaceship out of wooden blocks. He was known as 'the star' in the nursery. This referred to his popularity amongst children and the nursery staff. He was very lively, active and articulate.