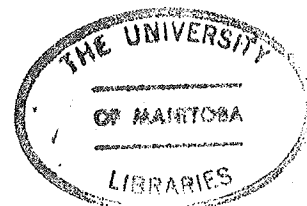


THE PLAY OF THREE MENTALLY HANDICAPPED
CHILDREN: AN ETHNOGRAPHIC STUDY

by Kathleen MacKenzie

A thesis
submitted in partial fulfillment
of the requirements for the degree of
Master of Education in the Department of Educational Psychology
The University of Manitoba



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ABSTRACT

This investigation was an observation study conducted in a naturalistic setting in which both handicapped and nonhandicapped children played. The intent of this study was to investigate the content of play of three mentally handicapped children in an integrated setting. Attention was given to 1) free play patterns, 2) toy play and use of materials, 3) symbolic play and 4) social play. Ethnography was the method of investigation. The three children were observed in play at the Integrated Preschool at the University of Manitoba once a week, for a two and a half hours over a four month period. The data was collected using hand written observations, indirect observation, video recordings and photographs. The interpretations of the data collected indicated the presence of certain developmental progressions that were found in the research studies investigating the play of nonhandicapped children. Play behaviors suggested to be stereotypic of mentally handicapped children were observed as were play behaviors that the research has indicated to be found in the play of nonhandicapped children. The observations also suggested that the play behaviors of the children may have been influenced by variables other than mental retardation. There are several implications in the results of this investigation. First research that adopts methodologies which allow for the investigation of developmental progressions should be encouraged. Second, the observations in this research indicated a need for research that examined the effects of play on such variables as setting, available materials, and levels of adult interaction. Finally, research in the area of play of mentally handicapped children should take place in naturalistic settings whenever possible.

ACKNOWLEDGEMENTS

I wish to thank the Chairperson of my committee, Dr. I. McIntire for her guidance and assistance.

I would also like to thank the other members of my committee, Dr. K. Seifert, Dr. M. J. Hughes and Dr. D. Jenkinson for their support and interest.

Appreciation and thanks is also extended to Shelley Turnbull for her help in the typing and printing of my thesis.

A special thanks to my family and friends for their constant support and encouragement.

Finally, my deepest appreciation is extended to the children who participated in this thesis.

CHAPTER ONE

Introduction

Need for the Study

The importance of play in the development of the young child is generally accepted (Li, 1981). Play is the means through which young children learn about their environment and develop cognitive and social skills. Piaget's observations revealed that play is the child's method of attaining knowledge through active construction and activity. In Play and Education, Weininger (1975, p.5) states that play is "not merely a form of activity. It is through play that the young child recreates the world and comes to understand it." The work of Tizard (1960) suggests that play is also important to the development of mentally handicapped children. Through play the children in this study increased their language and social skills.

While there is a great deal of literature to be found on the play of nonhandicapped children, there is a paucity of research on the play of mentally handicapped children (Li, 1981). Much of the research that is available was completed ten or more years ago and looked at institutionalized children or those in segregated settings. The conclusions drawn from these studies may no longer be valid as a result of such changes in the education of mentally handicapped children as early intervention and mainstreaming. Consequently there is a need for more information pertaining to the play of mentally handicapped children.

Statement of the problem

An observation study will be conducted in a naturalistic setting in which both handicapped and nonhandicapped children play. The intent of this study is to investigate the content of play of three mentally handicapped children in a integrated preschool. Attention will be given to 1) free play patterns, 2) toy play and use of materials, 3) symbolic play and 4) social play.

Conceptual Framework

Defining play is a difficult task and, according to some, such as Vandenberg, 1978 and Ellis, 1973, a counter-productive activity. Berlyne (1969) recommends that the notion of play be dispensed with as a "potentially viable scientific concept" (Vandenberg, 1978, p.724). This suggestion of total dismissal, while its validity may be questioned, emphasizes the difficulty in defining the term play.

The major problem in defining play is the notion that play cannot be included in one category as play is not exclusive to a single category (Ellis, 1973, p.21). Play is an activity that is not totally distinct from non-play activities. The difficulty with definitions of play is that they tend to be used in an 'all or none' fashion. Spodeck (1974), in Play as a Learning Medium, makes the point that "we tend to see activities as being either all work or all play; and to think that if something is work it cannot be play and if it is play it cannot be work."

Ellis (1973), in his discussion of why people play, states that play can be defined in terms of an assumed cause or motive, or in terms of its content.

When play is defined in terms of motive, then play is the behavior motivated by 'x', where 'x' is the presumed motive; thus when 'x' is located, then play can be defined.

The second form of defining play, as suggested by Ellis, is in terms of its content. According to this definition, one must "write down the attributes of the animal, its behavior and the setting which signals the playful character of the play behavior" (Ellis, 1973, p.17). This definition is perhaps the more useful of the two as it accepts the fact that people do play, and in it attempts are made to list the processes involved (Spodeck, 1974, p.17). Various theorists, such as Beach, 1945; Huzinga, 1947; & Piaget, 1962, used the above framework to postulate a number of characteristics that allow one to distinguish play behavior from non-play activities.

The use of the second format used to define play involves long and careful observation of the behavior of young children in their natural environment (Ellis, 1973, p. 17). This format demands detailed and descriptive data that reconstruct the processes involved in the child's play. Play then is defined in terms of what processes were involved in the activity.

In summary, play is a difficult concept to define. In terms of examining the play of mentally handicapped children, perhaps research should look at the content of the play, and from those observed elements in the content of play draw conclusions concerning the play of this group of children.

Play and cognitive development

Although we find it hard to define play and that magic moment at which the intellectual act becomes also a playful one, between the two exists

powerfully interrelated cognitive implications" (Stokes, 1975. p. 232). Play is seen as a vehicle for cognitive development by numerous theorists (Dansky & Silverman, 1973; Feitelson & Ross, 1973; Leiberman, 1965; Piaget, 1962; Reuben & Pepler, 1982; Sutton-Smith, 1967; Vygotsky, 1967 and Weininger, 1978) and has been the subject of a variety of research studies investigating the effect of play on cognitive development. The following discussion is an examination of play and its role in cognitive development. The views of Issac, Piaget, Vygotsky and Weininger are presented, as is selected research looking at the effect of play on creative thinking and problem solving behaviors as well as play training.

Piagetian theory asserts that play is essential to the evolution of intelligence (Piaget, 1962). Play is seen by Piaget as assimilation, "the incorporation of novel actions, objects, and situations into already existing ways of thinking (Rubin & Pepler, 1982, p. 289). Play is a process that is part of the child's experiencing of the world, an active and integrative part of intellectual development (Stokes, 1975). Vygotsky (1967) states that the child moves forward essentially through play activity; play is the source of development.

Action in the imaginative sphere, in an imaginary situation, the creation of voluntary intentions and the formation of real-life plans and motives - all appear in play and make it the highest level of preschool play (Vygotsky, 1967. p. 16).

Otto Weininger in, Play and The Education of the Young Child (1978) writes that play is an exceptionally important part of the young child's life. "Play evokes thought, language, activity; it permits the child to deal with his intellectual processes in a way which makes it acceptable to him" (p. 127). Weininger further states that play allows the child to learn about learning- "to

form a cognitive foundation for subsequent learning of competencies" (1978, p. 134). Susan Issac (1950) describes play as the child's method of living and understanding life. Others such as Berlyne, 1969; Bruner, 1976; and Sutton-Smith, 1967 have also promoted play as important, if not essential, to the development of the young child.

In summary, play is viewed as the means through which young children develop cognitively. Play provides young children with the opportunity to explore their world, experiment with objects and ideas, understand new concepts, and gather information.

Research in the area of play provided empirical support to the above theorists, and a number of researchers have investigated the relationships between play and creative thinking. Research conducted by Lieberman (1965, 1977) showed significant correlations between children's scores on a playfulness scale and three measures of divergent thinking. Replication of this study also found a positive relationship between playfulness rating and divergent thinking (Durrett & Huffman, 1968). Hutt (1971) investigated the responses of children to a novel toy. The results indicated that play quality was positively associated with divergent thinking.

Dansky and Silverman (1973) examined the effects of play on children's ability to produce alternative uses of common objects. The results showed that the children who played with the experimental objects produced significantly more nonstandard responses with objects not used in the treatment sessions. This finding led the authors to conclude that "playful activity can provide children with an opportunity to organize their experiences their cognitive abilities in a manner that is likely to facilitate imaginative adaptation of future situations (1973 p. 104)."

These four studies then provide evidence to suggest that play has a positive effect on creative or divergent thinking. The cited research demonstrated that the opportunity to play may facilitate creative thinking in young children.

A study by Slyvia, Bruner and Genova (1980) assessed the effects of play on problem solving behaviors. Analysis of the data revealed that children in the play group performed as well in solving the problem as the children who had observed the solution and were better than any of the training groups and the control group. The researchers also stated that the children in the play group engaged in more goal-directed activity and were more persistent than children in the other groups.

The results of the above studies, Dansky and Silverman, 1973; Durrett and Huffman, 1968; Hutt, 1971; Lieberman, 1965, 1977; and Slyvia, Bruner and Genova, 1980, suggest that children given the opportunity to play improve in their problem solving and divergent thinking abilities. Further research has been done in the area of play training. Perhaps the most noted is the work done in Isreal by Smilansky (1968). Her research suggests that play training improves the quality of symbolic play of children. Later studies by Galomb & Cornelios, 1977; Feitelson & Ross, 1974, Lovinger, 1974 and Rosen, 1974, have also shown results indicating the effectivieness of play training.

Play has been described as the young child's means of of developing, and this description is supported by empirical evidence found in the cited

literature. Evans best sums up a discussion on play in the following manner:

To the young child, play is life itself. Play fills mind and body,... A child engrossed in play is inventive, free and happy. Through the variety and depth of play, the child learns and grows. It is serious business; it is his world (19, p.267).

Ethnography: A Method of Investigation

A review of the literature strongly indicated a need for more research into the play of mentally handicapped children. One line of research could be to gather as much information as possible on the daily play and social behavior of young children of different developmental levels in an integrated setting (Gottlieb, 1982). While the child is in the act of playing, a researcher needs to record behavioral responses in a play setting that develops naturally. Since young children "spend most of their working hours rushing around", researchers suggest that descriptive data gathered via a naturalistic setting provide the kind of data that are needed to study play behaviors of handicapped children (Beveridge & Berry, 1977). Observational studies in naturalistic settings come under the category of ethnography.

Ethnography allows for direct observation of naturally occurring things and events. Wolf and Tymitz (1977) describe ethnography as "analytical processes involving the descriptive and systematic uncovering of human behavior and socio-cultural interactive patterns within an environment or milieu" (p.8). Ethnography is a reconstruction of the behaviors or events that have occurred. Wolcott (1975) states that ethnography is "literally, an anthropologist's picture of the way of life" (p. 112). Ethnography is a method of investigation designed to generate rich and extensive descriptive data (Corsaro, 1981).

The purpose of ethnography is not to test an hypothesis based on prior knowledge in order to understand behavior and to determine what is relevant information. A major aim of this method is to generate hypotheses; to discover what the problem is. Ethnography is not a method of testing but of understanding human behavior. "The ethnographer's unique contribution is his commitment to understand" (Wolcott, 1975, p. 113).

One advantage of ethnography is that the data is not generated from structured observations that may exclude important information. Barker (1963, p. 16) stated that in using a structured observation instrument, the researcher "disregards the intrinsic structure of the behavior stream and selects parts from it which fit his research design". Wilson (1977) makes the claim that this approach may gather information about human behavior that is impossible to obtain by more quantitative methods. In short, this method allows the research to gather information pertaining to all the occurring events and behaviors in the environment, not just those behaviors that fit the research design.

As in any design, there are possible limitations to the particular method of investigation. One such limitation is the researcher or ethnographer him or herself. In ethnography one is not adopting a method or methodologist "but an individual who will himself be the main instrument of research" (Wolcott, p. 116). As a result, the researcher looks directly at the qualities the ethnographer brings to the study. A second limitation to be considered is time. Ethnography demands time. Observations gathered over a long period of time reduce the danger of a biased selection of behavior. In other words, to achieve a more complete understanding of the behavior occurring, a researcher must observe over a long period of time.

Thirdly, ethnography does not rely on a large sample of subjects;

however, this limitation can be reduced through the use of a variety of instruments. The use of varied methods of collecting data is a critical aspect of ethnography (Wilson, 1977; Wolcott, 1975; and Wolf & Tymitz, 1977). Utilizing a variety of instruments, such as participant observer, key-informat interviewing, collection of life histories, structured and unstructured interviews, questionnaires, audio-visual recordings, and photographs, allows the researcher to gather large quantities of information.

Ethnography is an appropriate method of investigating the play of mentally handicapped children for two reasons. First, it allows one to look at the play in terms of its content, the processes that are involved in the child's play. Consequently, it allows the researcher to reconstruct the children's play; i.e., to describe how they play. Second, the descriptive data that is generated by this type of investigation can provide new information upon which to base hypotheses. In summary, ethnographic research examining the play of mentally handicapped children will provide descriptive data on the content of play that may be the basis for future hypothesis testing. The following section will provide the reader with definitions of ethnographic terms and other related terms that will be used throughout the paper

Definition of Terms

Natural Environment

"Historically, as well as currently, insights about human behavior have often been derived from observation of man in his natural habitat" (Brandt, 1972, p.1). Advancements in the field of behavioral science began with

observations of what transpired in everyday situations, for example, Piaget's observations of his own children in free play activities. The natural environment is described as a natural setting as opposed to one that is artificial to the individual in the setting. The natural environment may not necessarily be the 'normal state of affairs, as a hospital may be a natural setting for a person who is ill, and a nursery school is the natural setting for a preschool child. The natural environment is that environment outside the laboratory and away from the "obvious measurement type of setting and in the everyday world in which people are found most of the time" (Brandt, 1972, p.9).

Participant Observer

Participant observer can be described as one of the mainstays of ethnographic studies (Wolcott, 1973). The term itself is misleading in the sense that it does not refer to a single method, but rather to a combination of methods and techniques. The function of the participant observer is to "observe as fully, intensively, and extensively as possible" (McCall & Simmons, 1969, p. 96). There are two role that the participant observer can undertake: passive or active.

In theory the passive participant observer interacts with the observed as little as possible. Interaction with the observed outside the role of observer is viewed as an interference rather than as a way of gathering additional information. The major disadvantage of this role is that the observer is not in the 'confidence' of the observed and may be unaware of events that are directly related to the study (McCall & Simmons, 1969, p. 96)

The active participant maximizes his participation with the observed in order to gather data. The aim of this role is to strike a balance between active interaction with the observed and observation of the observed's behaviors. This type of observation involves the process of shifting from actively participating at one moment to observation and then back to the interaction (McCall & Simmons, 1969, p.96). The major advantage of this role, as stated by Schwartz and Schwartz, is that it allows the observer to 'identify with the observed', allowing him to better understand the 'subtleties' of communication and interaction (McCall & Simmons, 1969, p. 98).

In conclusion, participant observation can be defined as:

a process in which the observer's presence in a social situation is maintained for the purpose of scientific investigation. The observer is in a face to face relationship with the observed, and by participating with them in their natural life setting, he gathers data (McCall & Simmons, 1969, p. 91).

Direct Observation

McCall & Simmons (1969, p. 61) describe direct observations as "the archtypical technique of scientific inquiry in virtually every field". Simply stated, direct observation is repeatedly looking at an event and recording what has occurred. It is a method that allows the researcher to discover relationships among phenomena. In terms of the validity of data drawn from direct observation, Henry and Spiro (1953) suggest that there is a "close correspondence between anthropologists' direct observations and psychological test data (McCall & Simmons, 1969, p. 306).

It is suggested that the major disadvantage of direct observation is the presence of the observer. It is felt that the observer's presence may bias the

situation being observed. To reduce this bias, the researcher must observe for a period of time long enough to allow for the repeated observation of events in different contexts.

Indirect Observations

Indirect observations are those observations that were obtained from informants, when direct observation alone was not enough to obtain a complete description of the behavior. McCall and Simmons (1969, p. 4) in Issues in Participant Observation suggest two reasons for the use of indirect observations: (1) "the organization is typically being manifested in several locales simultaneously" and (2) "the organization has typically been in existence for some time before the scientist undertook the study".

Indirect observation uses informants as either 'surrogate observers', or as 'surrogate census takers'. In the 'surrogate observer' role, the informant observes events that occur in the absence of the researcher. In the role of 'surrogate census taker', the informant supplies the researcher with specific information such as life histories, specific incidents or special information.

In conclusion, indirect observation is a method of attaining valid and reliable data from informants to supplement the direct observations of the researcher.

Informants

McCall and Simmons (1969, p.4) define informants as "persons who were on the scene in the researcher's absence". Informants are individuals who are members of the environment being observed and have a role in that environment, Interviews are the main method of gathering data from the informant in which he/she reports "information presumed factually correct about others rather than about himself; and his information about events is about events in their absence" (McCall & Simmons, 1969, p.9).

In ethnography the informants can take on three roles: 'surrogate census takers'; 'representative respondent'; and 'surrogate observer'. All of these roles are considered legitimate and valid methods of gathering additional information pertaining to the study.

SUMMARY

The purpose of this study is to investigate the content of play of three preschool children identified as mentally handicapped. The processes involved in the play of these three children will be examined. The method of investigation will be ethnography.

The following chapter is a literature review of the research pertaining to the play of mentally handicapped children.

CHAPTER TWO

Review of the Literature

Introduction

A review of the available literature pertaining to the play of mentally handicapped children reveals a scarcity of recent research in this area (Li, 1981). Over half of the research available was completed ten or more years ago and looked at mentally handicapped children in institutions or in segregated settings. The conclusions drawn from these studies may no longer be valid as a result of the changes in the education of the mentally handicapped, such as early intervention and mainstreaming.

The research on the play of mentally handicapped children can be conveniently divided into five sections: research looking at developmental sequences; comparison studies of nonhandicapped and handicapped children's play; toy play behavior; symbolic play; and social play. It is interesting to note that the majority of the research consists of comparison studies. When a total of twenty-one studies were reviewed sixteen compared some form of play behavior of handicapped children with that of nonhandicapped children. It is not surprising that the results of these studies have laid the foundation for the construction of a somewhat negative picture of the play of handicapped children.

Developmental Sequences

It has been suggested that mental retardation is a delay in development. Those individuals labelled mentally handicapped pass through the same developmental stages as the nonhandicapped population only at a slower rate. Research in this section of the literature review examines the development rate of handicapped and nonhandicapped children; similar developmental sequences; and developmental changes in free play.

Woodward (1959), using techniques derived from Piaget's observation, examined the spontaneous play of severely handicapped children in an institution. Her observations lend support to the notion that these children have a developmental sequence similar to nonhandicapped children. However, Woodward cites certain 'mannerisms' such as "persistence of narrow and inflexible methods of exploration in these children's play" (Li, 1981, p.121).

A more recent study of play (Field, Roseman, DeStafano & Koewler, 1982) further substantiates the notion of similar developmental sequences. They found that the interaction of the handicapped child with the environment proceeds in a manner similar to children with no developmental delays; interaction begins with adults, then toys, then peers. Their observations indicated that nonhandicapped children vocalized to, offered toys to and shared toys with their teachers more often than did the handicapped children. Minimally handicapped and nonhandicapped children engaged in more looking at and manipulation of toys than the moderately and severely handicapped children. Examination of peer interactions showed that the nonhandicapped children looked at and vocalized with their peers more frequently than did the minimally and moderately handicapped children who in turn looked at and

vocalized with their peers more often than the severely handicapped children. While the authors state that generalizations of their results are difficult to make, their data indicated that handicapped children's interaction with the environment proceeds from adults to toys to peers. Finally, although self-directed behavior such as body rocking, lip sucking, and finger mouthing was not a specified category of behavior to be investigated, such activities appeared to make up a large portion of the repertoire of the moderately and severely handicapped children.

An examination of developmental changes in the free play behavior of mildly and moderately handicapped preschool children was conducted by Crawley and Chan (1982). Twenty mentally handicapped children, all of whom had organic etiologies, were observed in an outdoor playground at a segregated preschool. Analysis of the data indicated that the children spent very little time engaged in negative interactions while positive interactions involving both teachers and peers also occurred infrequently. As with older normally developing children, the older mentally handicapped children in this study were involved in less unoccupied/onlooker activity than the younger handicapped children. In developmental terms, it would seem that as the mildly and moderately handicapped children mature, they decrease the portion of time spent in unoccupied/onlooker activity. The results also indicate that the use of peer interaction increased as a function of age for mildly handicapped children. In conclusion, the authors 'tentatively' suggest that the most significant developmental change in mentally handicapped preschool children's free play is the shift from the predominant use of unoccupied/onlooker activity to that of solitary/parallel play. They further state that "while social play may not occur with a high frequency in mildly and moderately retarded

preschoolers, significant developmental progress in what may be prerequisite skills may be observed (Crawley & Chan, 1982, p.239)".

The literature reviewed in this section supports the theory that mental retardation is a delay in development. The cited research demonstrated that the play behaviors of these children emerged in a sequence similar to the nonhandicapped children but at a slower rate.

Comparison of Nonhandicapped and Handicapped Children's Play

As mentioned previously, the majority of the research available on the play of mentally handicapped children consists of comparison studies. These investigations report on the material preferences, themes shown in play, levels of organization, free play patterns, effects of object complexity, attention span of the mentally handicapped child as compared with the nonhandicapped child.

Horne and Philleo (1942) did a comparison study of the spontaneous play of mentally handicapped and nonhandicapped children matched for mental age (MA ranged from 6 to 8 years). The children were observed during free play in a room containing materials of a varied degree of inherent structure. The researchers observed noticeable differences between the two groups' choice of play materials and activities. Their data indicated that nonhandicapped children preferred materials and activities that allowed them to create something while the handicapped children favored materials and activities that imposed a set pattern of behavior. Horne and Philleo concluded that the play of the mentally handicapped child is connected to the stimulus characteristics of the play materials.

An investigation using Lowenfeld's (1959) World Techniques compared the play of mentally handicapped and nonhandicapped children. The World Technique consists of a small dry sand tray and a variety of figures, (e.g., human and animal figures, objects and buildings). The child's world is then analyzed in terms of number and kinds of figures used, as well as the action, verbalizations and themes shown. The data indicated for the handicapped child a lower number of verbal and action responses and a rather structured and less imaginative use of the play materials.

A third comparison study examined the levels of organization in the play of mentally handicapped and nonhandicapped children (Hulme & Lunzer, 1966). Specifically the researchers were testing the hypothesis that, when compared to nonhandicapped peers of a similar age, mentally handicapped children do not have the ability to plan and structure their own behavior. The children were observed during free play for fifteen minutes a day in their own preschool. The observers made no attempt to interfere with the spontaneous activities of the children. An extended diary method was used, and when possible, the children's language was recorded. The observations were evaluated using a scale of organization of play behavior developed by Lunzer (1955). No significant differences were found between the level of organization exhibited in the free play between the two groups. It should be noted that in both samples, increase in mental age made a difference to the variance. On the basis of these results, the authors caution the reader not to make the assumption that handicapped children have the same initiative as children with no developmental delays. They suggest that the lack of significant differences could be a result of the older chronological age of the handicapped children and their "routinization in the course of years of similar activity and relevant observations" (Hulme &

Lunzer, 1966 p. 118).

A computerized analysis of characteristics of Down's Syndrome and nonhandicapped children's free play patterns was conducted by Linford and others (1974). The children were given three 15 minute exposure sessions to the experimental play setting, followed by ten filmed and recorded sessions. During the play session, the children were allowed to play freely in the room with teacher intervention occurring only when there was a safety hazard. The data indicated that the nonhandicapped exhibited greater movement when compared with the children with Down's Syndrome. The researcher identified the Down's Syndrome children as being hypoactive, that is they moved less often and, when they did move, the movement was more slowly. Based on this data, they The data also indicated that the handicapped children made more use of the free play spaces as opposed to the equipment that was used by the nonhandicapped children. The researchers tentatively interpreted this difference as being the handicapped children's use of the free play space for the purpose of observing the other children in order to imitate them.

Switzky, Ludwig and Haywood (1979) investigated the effects of object complexity and age on the exploration and play of handicapped and nonhandicapped children. Twelve, 30-month-old, and twelve, 42-month-old handicapped children were given three dimensional random polygon objects which ranged in complexity between 4 and 40 times. Graduate students observed and recorded the children's time spent in play over three successive time periods. Their data indicated that the older mentally handicapped children explored objects of lower complexity more than either younger or older nonhandicapped children. It also showed that while exploration time decreased linearly with exposure time periods, play time increased linearly with

successive exposure and decreased with increasing complexity. The authors concluded, on the basis of their data and other cited literature, "that intellectual level, stimulus complexity and CA interact to determine the amount of exploratory behavior"(Switzky, Ludwig, & Haywood, 1979, p.164).

A more recent investigation (Krakow & Kopp, 1982) examined the attention span of both children with Down's Syndrome and nonhandicapped children. The investigation was broken down into two studies. In the first study, the subjects were 40 nonhandicapped children (12 and 18 months) and 16 children with Down's Syndrome (19 to 38 months). Each child was observed in a play situation where the child was seated on an mat with a bucket of toys which included a doll, necklace, metal bug, finger puppet, and a hammer. The child's mother sat nearby and was instructed not to initiate or comment on any play. The children's play was videotaped for a period of six minutes. The data indicated that, as a group, the children with Down's Syndrome were less socially oriented (e.g., giving toy to mom) and glanced less often to nonfocal toys and people in the room than the nonhandicapped children. The children with Down's Syndrome also spent more time unoccupied (e.g., staring into space) and were involved in more stereotypic behaviors (e.g., throwing toys). The authors suggest that their observations indicate a "limited repertoire of spontaneous play coupled with a relative absence of appropriate monitoring of the environment or engagement of other people" (Krakow & Kopp, 1982, p.37). They continue by stating that sustained attention, as observed in this study, appears to be more complex than simply focusing on a single object. Instead, they propose that sustained attention is an "appropriate balance between interaction with toys and the environment" (Krakow & Kopp, 1982 p. 38).

The second study looked at sustained attention of children with Down's

Syndrome (ages 3 to 4 years) as compared to nonhandicapped children (ages 2 to 2 1/2 years). The play situation was similar to the first study except that the bucket of toys was larger and contained more toys. The results revealed that the children with Down's Syndrome showed different patterns of behavior during sustained attention when compared to the nonhandicapped children. The handicapped children were more often engaged in repetitive or stereotypic play. They rarely attempted to involve their mothers, and they did not spontaneously shift activities as did the nonhandicapped children. The combined data from these two studies suggests that the children with Down's Syndrome have stereotypic and repetitive play activities that form part of a behavioral cycle "in which an ability to exploit the potential of the environment leads to preservation of play (Krakow & Kopp, 1982, p.39)". The authors state that it is not the quantity of sustained attention that is the problem for children with Down's Syndrome, but rather that it is certain qualitative aspects of their play that produce difficulties, thus inhibiting development. The cited comparison studies portray the play of handicapped children as being delayed in comparison to the play of nonhandicapped children. These results could be interpreted as a difference in developmental rate between the two groups of children and not a result of stereotypic behavior on the part of the handicapped children.

Toy Play Behavior

The following section examines the toy play behavior of mentally handicapped children. The three studies that were reviewed are comparison studies and look at the characteristics of mentally handicapped children's toy

play behavior.

Tilton and Ottinger (1964) investigated differences among autistic, mentally handicapped and nonhandicapped children by observing their behavior in a toy play situation. The children were observed during a 20-minute play period in which they were free to use the toys in any way they chose. Analysis of the data revealed significant differences in both the way the three groups used the toys and the combinational category of toy play. The autistic children were distinguishable from the other two groups by their repetitive manipulation and oral use of the toys. The mentally handicapped children spent significantly more time in pounding activities than the nonhandicapped children.

Weiner, Ottinger and Tilton (1969) reanalyzed the data of Tilton and Ottinger's study (1964) and concluded that the observational techniques used in the study combined with the multiple discrimination function analysis have practical utility as a diagnostic and evaluative measurement instrument.

A third study (Weiner & Weiner, 1974) was designed to differentiate among mentally handicapped children with known physiological or structural defects and two groups of nonhandicapped children matched on chronological (CA) and mental age (MA) respectively. The children were observed, as in the Tilton and Ottinger (1964), study in a naturalistic setting using video tape to record their play. Their observations revealed that the toy play characteristics of the children did differentiate between the handicapped and nonhandicapped children matched on MA, and those matched on CA. The data indicated that the combination category of toy play was the most important predictor in differentiating the nonhandicapped children from the handicapped children. The authors also state that, although the observation technique does not measure ability in the same sense that intelligence tests do, ability does play a part in

a child's choice and use of toys.

The studies reviewed in this section present data that suggest that

The studies reviewed in this section present data that suggest that mentally handicapped children spend significantly more time in pounding activities, and that the combinational category of toy play behavior was the most important predictor in distinguishing the two groups of children. As with previously cited research, the investigations in this section describe the play of the mentally handicapped child as being delayed and stereotypic when compared to nonhandicapped children.

Symbolic Play

Wing, and others, 1977; Hill and McCune-Nicolich, 1981; and Odom, 1981 have investigated the play of mentally handicapped children to determine the relationship between symbolic play and cognitive development.

Wing, and others (1977) examined the symbolic play of 108 severely handicapped and autistic children aged five to fourteen years. The children were divided up into three groups: 42 with no symbolic play; 23 with stereotyped, repetitive, copying play; and 43 who had flexible varied symbolic play. The data indicated that flexible varied symbolic play is seen only in children with nonverbal mental age and language comprehension above the nineteen month level. The authors state that children with Down's Syndrome, compared with those children with other organic abnormalities associated with mental retardation, are more likely to have symbolic play. They also state that children who do not engage in symbolic play are severely limited in their ability to learn.

A later study by Hill and McCune-Nicolich (1981) examined the relationship between cognitive functioning and symbolic play of children with Down's Syndrome. The children, who ranged from 23 to 53 months, were observed at home with either their mother or primary caretaker present. The children were assessed using the Mental Scale of the Bayley Scales on Infant Development; symbolic play was measured using procedures developed by Nicolich (1977). The results of this investigation indicated that the level of symbolic play was more highly correlated with mental age than chronological age. The authors propose that "play assessment can be used to identify the child's current level of symbolic functioning; experiences can then be planned and implemented to expand schemes at the current level and to attempt to induce the higher levels" (p. 165).

Odom (1981) conducted similar research analyzing the relationship of play to developmental level in mentally handicapped preschool children. The Denver-Developmental Screening Test was employed to establish the developmental level of the children. A combined observational measurement scale, based on Parten's Scale of Social Participation (1932) and Smiliansky's Scale of Cognitive Play (1968), was used to assess the level of play. The data supported the relationship between play and mental development in mentally handicapped children.

Social Play

This section of the literature review examined the social play of mentally handicapped children. The first study compares the social play of institutionalized and noninstitutionalized children in a free play setting. The

other three examine the play of handicapped children in integrated and segregated situations.

Capobianco and Cole (1960) examined the social behavior of both institutionalized and non-institutionalized children in a free play situation. The children had been identified as either educable or trainable. The results of this investigation led the researchers to suggest that mental age did not prove to be an indicator for the levels of play behavior, although they report that the play of mentally handicapped children is often delayed or solitary. The authors state that the value levels given to categories of social play should be considered. Creative and highly complex solitary play is often rated as being low on a social scale whereas aggressive social play is often given a high social score. The authors propose that "it would seem that the quality of the youngster's play should be taken into consideration". (Capobianco & Cole, 1960, p.649)". In other words, the researcher should take into consideration the 'content' of a child's play.

Peterson and Haralick (1977) analyzed the play behavior and social interaction of eight handicapped and five nonhandicapped children in an integrated environment. The study was designed to measure the type and frequency of play behavior between the two groups of children. The results indicated that play with handicapped peers was more likely to be isolated or parallel as opposed to cooperative. These results support the notion that the play of handicapped children is often delayed or solitary.

Dunlop, Stoneman and Cantrell (1980) examined the social behaviors and interaction of handicapped and nonhandicapped children. Analysis of the data indicated that the children changed their behavior differentially over time, and these changes moved in a direction that caused the two groups to be less

distinguishable over time. A major limitation of the research is that the children identified as handicapped had a mean IQ of 77.3 and were not that distinguishable from the nonhandicapped children at the beginning of the study. The researchers point out the influence of time on the results obtained in this study. The observations in the study were taken over an entire school year. Had the observation period been shorter, the data may not have indicated the differential changes that resulted in the groups becoming more similar.

A fourth study by Guralnick (1981) examined the social participation, constructiveness of play and communicative interactions of four- to six-year-old handicapped and nonhandicapped children. The children's social behavior was compared under conditions in which the children interacted in play groups homogeneous with respect to developmental level and in heterogeneous play groups. The results indicated that the more advanced children were involved in higher levels of social play, played more constructively, communicated more and received more communication from other children. The more handicapped children were engaged in more inappropriate behavior, unoccupied behavior, and less onlooker behavior, associative and cooperative play.

Another study examined the play of handicapped children in the presence and absence of nonhandicapped children (Field, Roseman, DeStefano & Koewler, 1982). Analysis of the data indicated that the handicapped children showed more prosocial, child-directed, and less teacher-directed behavior in an integrated setting. In the presence of nonhandicapped children, the social play of the handicapped children was more advanced.

Summary

The literature reviewed on the play of mentally handicapped children indicated a restricted play approach on the part of these children. Their exploration of materials is often inflexible and narrow, and their use of materials, their social play and symbolic play is delayed when compared with the play of nonhandicapped children. Despite this somewhat negative portrayal, it is important to consider the findings of the three studies reviewed that deal with developmental sequences (Crawley & Chan, 1982; Field, Roseman, and others, 1982; & Woodward, 1959). Mentally handicapped children proceed through similar stages of development as nonhandicapped children but at a slower rate. These findings support the theory that mental retardation is a delay in development. If this is the case, then one would expect as "natural" the play of mentally handicapped children to be delayed in comparison to the play of nonhandicapped children.

The purpose of this study will be to investigate the content of play of three preschool children identified as mentally handicapped. As the literature and the definition of mental retardation would suggest delays and differences, this study will not compare the play behaviors of mentally handicapped and nonhandicapped children. Rather the processes involved in the play of these three children will be investigated. The following chapter will describe the specific research methodology to be employed in this investigation of play.

CHAPTER THREE

Design of the Study

Introduction

This study is an investigation of the play behaviors of mentally handicapped preschool children. Three children, who had previously been identified as mentally handicapped and who attended the integrated preschool at the University of Manitoba, participated in the study. These children were selected on the basis of regular twice weekly attendance at the preschool.

The Population Studied

The preschool at the University of Manitoba was designated as the research site. This selection was based on the fact that the preschool was integrated and had four mentally handicapped children enrolled in the program at the time of the study.

The sample of three children was selected from a population of four children. Selection was based on regular attendance and previous identification as being mentally handicapped. At the time of the study, the fourth child had had no formal assessment and for this reason did not participate in the study.

Prior to the start of the study, the researcher met with the parents, explained the nature of the investigation, and obtained written permission from them to have their children observed and studied. The following description of each of the children and the setting in which each was observed will provide a

more detailed account of the sample investigated.

Child A

Child A is a verbal five year old who has been diagnosed as having Down's Syndrome and assessed as mildly retarded, with a developmental age of 3 1/2 to 4 years according to the Yale Developmental Scale. She attends the preschool two mornings a week with her 2 1/2 year old sister who is nonhandicapped. She also has a second younger sister at home. For the past two and a half years Child A has attended the University Preschool and a summer play program that was offered at the University. The researcher knew the child for the year prior to the study and during the summer was one of her teachers at the play program. Child A is enrolled in a segregated preschool five afternoons a week. This preschool is a fairly large center, having many programs designed for mentally handicapped, physically handicapped, and developmentally delayed children. She had attended this center for the three years prior to this study.

From discussions with her mother, it was determined that the major objective for Child A in attending an integrated setting was to develop social skills and to be encouraged in the use of verbal communication. Concern was expressed that she develop social and language skills that would facilitate her integration into a regular kindergarten in the public school system the following year.

Child B

Child B is a 2 1/2 year old who has been diagnosed as being developmentally delayed. She was assessed as having a developmental age of 18 months according to the Yale Developmental Scale. Child B wears glasses to correct poor vision as well as special lifts in her shoes as a corrective measure. At one point during the study, she was taking mega vitamins though her mother stopped giving them to her as the mother felt that they were causing the child to become hyperactive.

Child B attended the preschool two mornings a week with her four year old brother and a four year old neighbour. Apart from attending this program, she was enrolled in an integrated toddler program and a special olympic gymnastic class. Her mother also worked with her at home using the Portage Developmental Program.

Conversation with Child B's mother revealed that the two major objectives for Child B's attending the preschool were to develop language and social skills. To meet these objectives, a graduate student in Special Education worked within the classroom in order to help facilitate integration and to develop and implement an individual language program with Child B.

Child C

Child C is a 2 1/2 year old, who has been identified as having developmental delays, the causes of which are unknown. At the beginning of the investigation, he was assessed at a developmental age of 15 months according to the Yale Developmental Scale. Child C wears glasses to correct

vision problems that were diagnosed a month before he started attending the preschool.

Child C was enrolled in the preschool in March, two months after the study had begun, and attended two afternoons a week. This preschool was his first experience in a group setting with peers. His mother was concerned that he had limited social contact with peers at home and she felt that the preschool offered him the opportunity to interact with nonhandicapped peers in a play situation and to develop appropriate social skills. The University Preschool was, at the time of the study, the only program that Child C was attending.

The Setting

The children attending the preschool ranged in age from 2 1/2 to 5 years old. The preschool was operated by three student teachers in the morning, and two in the afternoon. The students were in their fourth and final year of the Early Childhood Education program. Graduate students in Educational Psychology, majoring in Special Education, at the Master's level worked in the preschool and were responsible for the development and implementation of the individual programs for the mentally handicapped children.

The preschool is housed in a large open room, 1326 square feet. The children are free to make choices as to the activities in which they will participate. Activities and materials available to the children encourage independent behavior, exploration, experimentation, and play. These centers include sand and water area, house corner, store, block corner, climbing equipment, art area, reading corner, puzzle and table toys area. There is an

observation booth at the end of the preschool which is used by parents, students, and other individuals to observe the children. Please see Appendix II for a diagram of the physical set up of the preschool.

The only structured activities that occur during both sessions are snack and clean-up-time. The morning session does have a group time for singing and dancing, although the children are allowed to choose whether or not they wish to participate. A quiet time is scheduled for the last part of the session, during which time the children are required to choose an activity in a specific of the room. A variety of activities and materials is made available for the children to choose from (e.g., science experiments, logic games, art activities). The afternoon session has a scheduled circle time in which all of the children are required to participate and occasionally they will have a quiet time, similar to that of the morning session.

Methods of Gathering Data

The method of investigation was ethnographic in approach. The researcher employed a variety of techniques to gather information on the content of play of the three mentally handicapped children. The following techniques were used to gather data:

- 1) Hand written observations
- 2) Indirect observations
- 3) Photographs
- 4) Video tapes

Observations

Using handwritten transcripts, the observer recorded the play behaviors of the three mentally handicapped children during weekly visits to the preschool. All behaviors or activities that the child engaged in voluntarily, that is activities or behaviors that were child-directed as opposed to teacher directed, were recorded. The observer, when not recording, participated in the ongoing activities of the preschool and assisted the teachers when needed. No observations were taken during instructional time, teacher directed interaction or structured group activities such as snack. Each child was observed once a week in the preschool, with the observer present for the entire 2 1/2 hour session. A schedule specifying days to observe the children was drawn up and was adhered to as much as possible. If a child was sick on an observation day, the researcher would observe that child's play on another day during that week. During snack the observer would leave the room to read over notes, add information, and would return when snack was finished.

Observations of the children's play were made in order to look at the content of play and to investigate the processes that were involved in the children's activities. A prearranged coding system was not employed so as to avoid the excluding behaviors or activities that might not fit into a prearranged coding system

Data was collected over a four month period, with a total of 80 hours of observation of the three children's play. Child A was observed for approximately 35 hours, Child B for 25 hours, and Child C 20 hours. The differences in observation time among the children was due to illnesses and other unavoidable absenteeism on the part of the children. As well, Child C

did not start attending the preschool until one month after the investigation had begun.

It was not possible to record all the children's play behavior during a 2 1/2 hour period, nor was it possible to record all of the children's language or gestures. To gather as much data as possible, the observer would sit near the child and follow him or her around the room, remaining far enough away so as not to make the child uncomfortable or to interfere with the child's play. However, the children would often invite the observer to participate in their play or would converse with her. In other words, the observer would either become an active or passive participator as determined by the child and the situation.

Indirect observations, observations made by informants such as fourth year certification students, graduate students and parents of handicapped children, were the second method of observation employed. Impressions and observations made by the informants of the children's play behavior when the observer was not present were recorded as secondary sources of information.

The researcher also had access to the individual instructional programs that were implemented by the graduate students for the children. The graduate students made available to the researcher their hand written observations and those recorded on video tape.

The researcher had regular conversations with the parents of the three children. These conversations generally occurred when the parents were dropping off or picking up their children from the preschool. Discussions usually revolved around the children's play behavior, changes in other behaviors, concerns for future education, and everyday general conversations.

Video-Recordings and Photographs

Video recordings and photographs of the children's play were used as a second method of recording data. These observations were employed to give further information concerning the content of play. The information gleaned from the video-recordings and photographs were transcribed into handwritten observations.

One of the graduate students working in the nursery assisted in the gathering of observations using a Portable Video Cassette Recorder. Often she would record behaviors on the video recorder while the researcher recorded the behavior using hand written transcripts.

Presentation of the data

Anecdotal information describing the play behavior of the children is provided to give a complete description of the content of play and the processes that were involved in the children's activities.

The play behavior of the children will be discussed under the following four categories: Free Play Patterns, Toy Play and Use of Materials, Symbolic Play and Social Play. The exception to this structure will be for one of the children where Symbolic Play had been replaced with Self-Directed behaviors. The definitions of the aforementioned categories are as follows:

Free Play Patterns: The child's movements through the room as observed during a 2 1/2 hour period. That is, the general pattern of behavior exhibited by the children in the preschool.

Toy Play and Use of Materials: Examines both the

types of materials and their usage by the children. The use of materials will be categorized using an ethological sequen of responses. (Garwood, 1982)

Exploration- tentative interaction with enviromental objects or events to determine their nature or safety.

Play- non-goal oriented experimental activity.

Application- goal oriented behavior.

Symbolic Play: "In symbolic play he will, likewise, seperately or in combination, substitute real objects with make-believe objects or even sheer declarations, and play roles and perform dramatic scenes alone with companions, real or imaginary. (R. Jermann, 1971)"

Self-Directed Behaviors: Activities that center around body and are "characterized by simple repetitive muscle movements, with or without objects". (Garwood, 1980)

These types of behaviors are described by Smilansky (1971) as Functional Play.

Social Play: The interactions the child has with the people within the preschool, using Parten's (1932) Scales of Social Development.

Solitary Play- the child plays alone with his own materials or activities and makes no attempt to interact with other nearby children.

Onlooker Behavior- observation of the activities of the other children but no active participation in those activities.

Parallel Play- the child's independent play occurs in close contact with another child's play but with little if any mutual play.

Associative Play- play that is characterized by sharing, borrowing, and lending of play materials among the children.

Cooperative Play- play that is a goal-oriented group activity, typically directed by one or two of the group members.

The observed patterns of play will be discussed in the following chapters, with reference to both the literature pertaining to the play of mentally handicapped children and to the development of play behaviors.

CHAPTER FOUR

Child AIntroduction

The following three chapters provide a description of the content of the play of three mentally handicapped children in the integrated preschool at the University of Manitoba. The chapters combine information obtained from written observations with that from observations made by informants, video recordings and photographs.

Each chapter is divided into four sections, which examine the following areas of play: Free Play Patterns, Toy Play and Use of Materials, Symbolic Play and Social Play. The exception to this pattern will be for Child B where Symbolic Play has been replaced with Self-Directed Behaviors. For Child A and B, the data for each of the sections will be broken down into three, five week intervals of observation time. The third observation interval was six weeks long as compared to the first and second. This increase was due to the school spring break holiday which occurred during this time period. The data for Child C was broken down into one observation interval of five weeks and a second interval of four weeks. The second observation was five weeks long; however, the preschool was closed for one of the five weeks for the school spring break.

Before the play of each of child is discussed a brief introduction to the child is offered. The introduction focuses on how the child is perceived by his/her parents and by the graduate students, as well as how the child is

presented by the results of the Yale Developmental Scale.

Child A

A is a verbal five year old diagnosed as having Down's Syndrome and is considered to be mildly retarded. She has been assessed at a 3 1/2 to 4 year developmental level according to the Yale Developmental Scale. She attends the integrated preschool two mornings a week with her 2 1/2 year old nonhandicapped sister. In addition to the university program, A attends a segregated program five afternoons a week and a segregated gymnastic program that is offered through Special Olympics once a week.

A's mother and father described her as quite capable in terms of her academic performance and showing considerable talent in the area of gymnastics. They feel that A has excellent self help skills and is extremely independent. Her father says that A "should go far". "She tries to do as much as possible for herself and often refuses to let others help her". At home, according to her parents, A is a leader and will direct the play of her two younger sisters.

Conversation with A's mother revealed that the major parental objective for A's attending the integrated preschool was to develop her social skills and to encourage her use of verbal communication. Her mother describes A as a bright girl, although quite shy and lacking in self-confidence. A's mother is concerned that A's shyness and her lack of verbal communication will create difficulties when A enters the public school system at the kindergarten level. A's mother hoped to get A involved in speech therapy before she started kindergarten. A's speech is often difficult to understand due to her thick

tongue. Her mother felt that A's reluctance to talk to other children was a result of A's past experiences of not being understood by people.

The written observations of the graduate students presented a similar description of A. They felt that she was able to function well in the preschool. A displayed excellent self help skills and independent behaviors. "A persisted in doing things for herself. For example, A did not go through a door that was already opened or being held open by another. She proceeded to another door, opened it and went through it." The graduate students, too, were concerned about A's reluctance to interact with the other children. They stated that their goals were to develop A's social skills and to facilitate verbal communication.

In addition to the activities and experiences that were provided for all the children in the preschool, an individual program was developed for A by the graduate students so that the objectives of her mother and the graduate students could be met. Specific activities were introduced by the graduate students during free play to encourage social interactions. Usually one or two activities were specifically planned each day. The graduate students encouraged A's interaction with other children whenever possible.

It should be noted that A's actual play time in the preschool was limited as she had to leave half an hour early in order to get to her afternoon preschool. Her time was further limited later on in the study when A became involved in a computer research project which meant that she was out of the room for about half an hour at the end of the morning. With the time spent in the computer project as well as snack and cleanup, A often had only about one hour and a half in which she was free to choose her activities.

The following anecdotal observations, with indirect observations

interspersed where appropriate, will construct a picture of A's play in the preschool.

Free Play Patterns

First Observation Period (January 3 - February 4, 1983)

A generally arrived between ten to fifteen minutes after nine and entered the room with her younger sister and mother. After kissing her mother good-bye, she went directly to an area in the room and usually did not acknowledge any greetings that she received from the adults in the room. Most days she went to the top of the climber where she sat and observed the activity in the room. After about five or ten minutes, she climbed down and proceeded to start her activities for the day.

The teachers in the preschool had recently set up a store which contained a toy cash register, and during this observation period the cash register became a favorite toy of A's. After coming down from the climber, she took the cash register from the store and carried it back up to the climber where she played with it. If A did not go back up the climber, she then often went to the art table. From there she either returned to the climber or to the book or puzzle area. She spent the rest of the morning fluctuating between the climber, the art table, book corner and puzzle area. In each area, she played for an average of fifteen to twenty minutes though there were times when she played for longer than half an hour. During the first free play session of each day, the graduate student working with A had an activity designed to encourage group interaction. These activities generally occurred about a half

an hour after A arrived.

Cleanup time and snack followed free play. During this time, A helped clean up the room and then ate her snack with the other children. Snack was followed by a quiet time during which time A sat with either the graduate student or the researcher and read books or did puzzles. A did not participate in the science experiments or other activities that were offered at this time. A sing song was offered after quiet time for those children who wished to participate. A usually sat on top of the climber and sang from there.

As A had to catch a bus to get to the segregated program in the afternoon, she left half an hour earlier than the other children. When her mother came to get A, she was usually reluctant to leave the preschool. Some days she sat up on the climber refusing to come down.

Second Observation Interval (February 7 - March 11, 1983)

A arrived at the prechool with her mother and younger sister, usually about ten or fifteen minutes after nine. After kissing her mother good-bye, she went off to an area to play. While she began some days on the climber, she began to start into play at other areas. At the end of this observation period, she no longer began her day at the top of the climber.

The early childhood teachers set up an area in the science corner where the children mixed sand and water together. During this observation interval, A spent the majority of her free play time involved with this activity. Other activities in which she participated included art, puzzles, books and climbing on the cube. The climber had been converted into a space ship for some three weeks during this observation interval and became the focal point for dramatic

play in the preschool. A did not make use of the climbing frame as a space ship nor did she use it to climb on when other children were playing there. As well, A was not observed playing in any of the dramatic play areas of the room such as the house corner or the store.

A spent at least ten to fifteen minutes at one activity. While involved in an activity, A often stopped to look around the room and was observed observing the other children in their play. However, although she observed the play of other children, she made no attempt to join in the play.

As in the first observation period, A was involved in an individual program with one of the graduate students. This program involved the introduction of activities during free play to encourage A to interact with other children. These activities usually occurred about half an hour after A arrived.

During this interval of observation, A did not join in snack with the other children. Instead she waited until the other children were finished or just about finished their snack before she ate hers. She continued to read or do puzzles in quiet time and did not participate in the science or other activities that were available during this time. A watched the children sing and dance from the top of the climber and from there sang along. She remained reluctant to leave when her mother came to get her, prolonging her play till the other mothers came for their children.

Third Observation Interval (March 14 - April 22, 1983)

A entered with her mother and younger sister and went directly to an activity. The sand and water, as well as the climbing toys, were the most

frequent choices followed by puzzles, books, and art activities. A began to take "shopping trips" using the play car. She was not observed playing in the store other than to take some 'groceries' to the car or into the house corner.

A continued an ongoing individual program that took place approximately half an hour after she arrived. She was also involved in a research program that required her to leave the room right after snack. When she returned to the room, her mother was there to take her home. As she was no longer in the room when her mother came to get her, she was not as reluctant to leave the preschool.

A stayed at one activity for a period of at least fifteen minutes, if not longer, and stopped occasionally to observe the ongoing activity in the preschool.

It should be noted that, throughout the study, A did not appear to need adult intervention in her play. She, herself, planned her play, moving from one activity to another as she pleased. When she entered the room, A went directly to some activity without any adult encouragement. She rarely asked for adult assistance unless it was to locate an item that she could not find or reach.

Toy Play and Use of Materials

First Observation Interval (January 3 - February 4, 1983)

Based on the first five weeks, of observations, A's toy play and use of materials can be described as 'appropriate'. "Appropriate" means that she did not display mouthing, throwing of materials or indiscernible manipulation-behaviors that have been suggested as common to mentally handicapped

children by some researchers. What emerged from the researcher's observations was that A used materials and toys in a productive manner as tools or props in her play. One of the graduate students commented that A's use of toys in no way distinguished her from the other children.

Upon entering the preschool in the morning, A generally went to the large climbing frame located at the back of the room. She climbed up and sat, for a short period of time, and watched the play that was occurring in the room that day for a short time period. A then got down from the climber to select a toy or an activity. It was observed that A, for the most part, selected the same toys with which to play with or used the same materials in the preschool. The climbing frame was the toy that A favored the most, followed by the large wooden cube, books, the cash register, food items from the store, puzzles and art materials. This is not to say that A did not use the other available toys, but just that she was observed most often using the same toys.

The researcher also observed that, as with toys, A consistently selected the same few areas in which to use the toys. That is, A chose a toy and then took it to a selected area in the room. The climbing frame, as well as being the toy most often selected, was the place to which A generally carried a toy. She put the toy under one arm, and using the other hand to climb, climbed to the top of the climber to play. The art table, book corner and puzzle area were also spaces to which A carted toys. Dramatic play areas, such as the house corner and the store, were areas that A only entered to remove a toy to take elsewhere in the room.

The toys and areas in the room that were selected by A lent themselves to solitary and parallel play. This was especially true when A selected a toy from an area where children were playing only to carry it away to the top of

the climber.

A final note, A spent long periods of time involved with one activity. It was not unusual to observe A engaged in an activity for up to twenty minutes before moving on to another. As well, A often fluctuated between two or three activities during the day. For example, in one morning she went from the climber and the cash register to the art table to the book corner. She did not always proceed in the order mentioned.

Perhaps the most interesting observations of A were those in which she tried to solve a problem. Whether she was trying to piece together a broken clothes pin she had found on the floor or whether trying to put a wheel back on a toy car, A used the toy or materials in both a practical and creative manner to get the job done. A rarely asked for assistance from others while she experimented with different techniques to solve the problem at hand.

The problem solving behaviors were observed continually throughout the first five weeks of observation. e.g., A stopped in the hall to adjust a rug that was stuck under one of the large doors. She manoeuvred the rug around until it lay in a manner she deemed to be correct. A invariably attempted to fix any broken object she came across. The climber presented A with a variety of challenging problems, such as how she to climb to the top with five books under her arm, and then how to get down still carrying the books.

Second Observation Interval (February 7 - March 11, 1983)

During the second observation period, A continued to exhibit appropriate play behavior. Both the fourth year certification students and the graduate students commented on A's ability to function as well as any child in the

preschool.

As in the first observation interval, A consistently chose the same toys to use in the preschool. However, she began to select other toys while deleting some toys from her play repertoire. The climber, large cube and books were still being used on a regular basis. An exception to this pattern occurred when the teachers made the climber into a space ship and it became a focal point of dramatic play in the room. During this time period, A rarely played on the large climbing frame and spent more time in the large wooden cube. The fourth year teachers had started placing bowls of sand and water out for the children to use, and this activity was the most frequently selected activity by A. In this activity, A mixed and poured the various mixtures into containers.

When A was not playing with the sand and water in the science area, she selected toys from other areas and moved them to an area where she chose to play. The climber continued to be the most favored area to take toys. The book corner and the puzzle area were also used by A as play space. As with the first observation interval, there were no observations of A playing in the store or house corner. She entered these areas only to remove toys.

It was observed that A spent long periods of time involved in one activity. On one morning of observation, A was observed for an hour playing with the sand and water in the science corner before moving on to another activity. As in the first observation interval, A's play revolved around two or three activities.

Problem solving remained a consistent observable behavior in A's play. The sand and water provided A with numerous problems from fixing the egg beater to figuring out how to open and close the water container. As a rule, she did not ask for adult assistance in solving the problems that she

encountered. When she felt that she required assistance, she usually asked the researcher for help. A preferred to be given suggestions on how to solve the problem and got quite annoyed if the adult manually solved the problem for her. Often A was observed watching how other children who had encountered a similar dilemma solved their problems. She then imitated their actions. This behavior was seen when A learned how to swing on the rope that hung down from the climber. She watched the other children bring a chair over to the rope, stand on the chair, jump up and wrap their legs around the rope and then swing. A then went over to the climber and imitated the children's actions.

Third Observation Interval (March 14 - April 22, 1983)

A was absent from the preschool for a two week period due to illness. As well, during this observation interval, A was participating in a research project that required her to leave the room for the last half an hour of the morning.

As in the first and second observation intervals, A continued to exhibit appropriate play behavior. In this observation interval, A again chose similar toys to play with in the preschool. The climber remained a consistent choice, and art activities replaced the sand and water as a favorite choice. Books, puzzles and the sand and water table continued to be dominant activities in A's play. A was observed twice using the play car as part of her play. This was the first time A had been observed using the car as part of a dramatic play sequence.

A continued playing in the same areas of the room, those areas being the book corner, puzzle corner, art area and the climber. She removed toys from areas to take them to more preferred areas of play. The climber remained her

retreat, a place where she took toys to play in solitude. The house corner and store were areas that A entered only to remove toys and not to play in.

Problem solving again emerged as a dominant behavior in her play. She continued solving problems on her own, rarely asking for adult assistance. A was observed using observation as a method for solving problems. One day the researcher was sitting blowing up balloons. A watched as the researcher stretched each balloon out before blowing them up. The researcher gave A a balloon to blow up and watched as she first stretched the balloon and then tried to blow it up. Like the researcher, if the balloon did not inflate on the first attempt, she would put it down and try another.

Symbolic Play

First Observation Interval (January 3 - February 4, 1983)

Based on the first five weeks of observation A's symbolic play revolved around imitation of adult activity. A acted out scenarios of adult activities with which she has had previous experiences. Her imitation of an adult role was detailed in terms of language and gestures. A tapped the side of a bowl with her spoon while making a birthday cake; she told her "student" "Good Show" when the "student" gave correct responses in a language lesson; and when she read to the "class", she held a book in a teacher-like position. A was never observed in a dramatic or imaginative play situation, that is in those situations that involved make-believe. A did not dress up to become Princess Leia or drive in the General Lee, whereas other children in the classroom built

castles and dressed up as knights, princesses and dragons at one point during this observation interval, A watched the children from her perch on the climber. She did not overtly participate in the play.

One symbolic play episode, involving another child, was observed during this interval of observation. The child was three years younger than A and was in the process of learning English. Both A and the other child were sitting in the large wooden cube with the food items (i.e., milk container, egg cartons, tin of juice) from the store. A handed the items to the other child and had her label each one as she did so. Correct responses were met with "Good Show!" or "Way To Go!". If the child gave an incorrect response, A told her the correct answer and asked the child to repeat it. More often than not, A's symbolic play was either solitary or in a paralled play situation with her sister. It is also important to note that A's symbolic play, based on written observations, never occurred in the dramatic play centers, the house corner or store.

Symbolic play was not a regular feature of A's play according to the researcher's written observations. However there were times when it was not clear what A was doing, particularly when she was up on the top of the climber talking to herself as she played with a toy. One of the graduate students commented on this situation, stating that often she was at a loss as to just what A was doing since it was difficult to understand what she was saying and often, when an adult approached, she stopped the activity.

Second Observation Interval (February 7 -March 11, 1983)

During the second observation interval, as in the first observation interval, symbolic play was not a regular part of A's preschool play. A's

symbolic play was characterized by adult role playing. For the most part, A took on the role of a teacher or a mother. As a teacher, she taught the researcher vocabulary or how to locate pictures in a book; as a mother, A prepared meals while the researcher had to 'eat everything on her plate'. One of the graduate students commented that in observing A's symbolic play one could gather information on A's interaction with the adults with whom she came in contact and the type of interaction that generally occurred.

Dramatic or imaginative play was absent from A's symbolic play as were other children. A's mother commented on how A rarely became involved in symbolic play at the preschool. At home, according to her mother, A organized games of house or school with her younger sisters following her directions. This type of organization and symbolic play was not observed by the researcher in the preschool.

Observations taken during this time period revealed that A still did not play in the house corner or store, the dramatic play centers found in the preschool. At one point, A refrained from playing on the climber when it was changed into a space ship. During this time the climber became a focal point in the room for dramatic play on the part of the children in the preschool. When this type of play was going on, A did not use the climber and instead climbed on the wooden cube.

Third Observation Interval (March 14 - April 22, 1983)

Observations taken during the third observation interval indicated that symbolic play was still not a major part of A's play in the preschool. The symbolic play that did occur revolved around adult role playing. A filled a

shopping bag with groceries (food items from the store) and put them in the car to drive home. Playing teacher with the researcher was another role that she took on.

Dramatic or imaginative play with other children was not observed in the observation interval. The symbolic play that did occur was for the most part solitary or parallel with A's younger sister. The only cooperative symbolic play which occurred involved the researcher's being the student and A being the teacher. A still did not play in the house or store, and A entered these areas only to remove items. She was never observed dressing up in any of the clothes that were available either.

Both the graduate student working with A and the teachers in the room were concerned over A's lack of interaction with the children. A was encouraged to join with the other children in taking trips, going to the restaurant or hiking through the imaginary jungle; however, A refused any suggestion or request to join in the play. A's mother felt that this lack of participation in the ongoing dramatic play was due to A's lack of self-confidence. She felt that it was difficult for the children to understand A due to her thick tongue and that A realized this. As a result, due to this and past experience with people not understanding her speech, A avoided interactions with people who could not understand her. Her mother felt that A found it too frustrating dealing with people who could not understand her speech.

Social PlayFirst Observation Interval (January 3 February 4, 1983)

Observations taken during the first observation interval indicated that A had few interactions with other children in the preschool. A selected areas in which to play that often had one or no other children playing there. She removed toys from areas that contained a number of children and took the object to another part of the room. When children entered area in which she was playing, A made no attempt to interact with them and, for the most part, did not respond to interactions initiated by the other children. Often she left the area completely.

A was observed watching the play of other children in the preschool. She often sat on the top of the climber and watched the action below. A often waited till the children had left an area and then went and imitated their play. One time, some children were jumping from a climbing horse while A watched from atop the climber. Once the children had left, A went over and began to jump from the horse. During the singing time, A sat on the climber and sang along from there.

A's interactions in the room were, for the most part, limited to her sister and the researcher. There was also some interaction with the graduate student who was working with A and the teachers in the preschool. However these interactions were generally initiated by the adult and not by A. A told her mother that she was "shy" of the graduate student. As well, the graduate student felt that A did not respond positively to her. A's mother felt that this situation was due to the graduate student's difficulty in understanding A and

A's awareness of the graduate students's difficulty. Often A approached the researcher for assistance in communicating with other adults in the room. Having known A for two years, the researcher had minimal difficulty in understanding her.

Based on the observations taken, A's social play was most often solitary or parallel. As mentioned previously, A, for the most part, selected toys that lent themselves to this type of play. There was one instance of cooperative play and that took place with one other child who was younger and who was just in the process of learning English. In this case, it should also be noted that A was the initiator and the director of the play.

Second Observation Interval (February 7 - March 11, 1983)

During this observation period, A continued most of her activities in parallel or solitary play situations. Her interactions were still principally limited to her sister, the researcher, the graduate student and the teachers in the room. Concern was expressed by both the graduate student and the teachers over what they thought to be A's avoidance of other children in the room and themselves, particularly since she now did not eat snack with the other children. Instead A waited till the children had finished eating and then went to the table and ate her snack. A's mother was finally able to place A in a speech therapy program at the segregated preschool A attended in the afternoon. It was hoped that this program would increase A's self-confidence to the point where, if she did not begin interactions herself, she would respond to the other children's initiations. While no actual increase in interactions between A and the other children was observed during this observation

interval, the researcher, graduate student and the teacher did observe an increase in A's observations of the other children.

Observations taken indicated that A spent the majority of this observation period playing with the sand and water in the science corner. She did not play on the climber for some two weeks when it was remade into a space ship. As in the previous observation interval, the observations gathered revealed that A spent the greatest portion of her play time away from other children while involving herself in activities that lent themselves to solitary or parallel play.

The majority of interactions initiated by A were with her sister and the researcher. She still often did not respond to initiations made by other people in the preschool. Frequently she communicated through the researcher when talking to other people. This communication pattern is made particularly clear in the following incident. A and the researcher were sitting at the table with the sand and water when one of the university professors came over to talk to A. He asked A a question; she responded with an appropriate answer. The professor, however, was unable to understand what A had said and asked the researcher if she knew what A had said. The researcher then repeated what A had said. The rest of the conversation was characterized by the professor's asking a question and A's turning to the researcher and telling the researcher the response. In turn, the researcher repeated the response to the professor.

Third Observation Interval (March 14 - April 22, 1983)

This observation period revealed an observable change in A's social play. The change came about one morning when a group of children along with A

were in the science corner playing with the sand and water that had been put out on the table by the teachers. It seemed that A was the only child that was able to open and close the nozzle on the water container. A was continually being called over by the other children to open the nozzle on the container so that they could get some water. A responded by taking the container that the other children wanted filled and, after opening the container, filled it up. While A was not verbally responding to the children, she was responding. This activity continued the next observation day as well. However, on this day, the children used all the water in the container and so they decided to fill their containers using the water fountain in the hall. They called A to join them which she did. Soon A and the other children who were at the table were busy going back and forth together into the hall to get water. That morning at snack, A told the researcher that she would have snack and was going to sit with a particular child who had been involved in the sand and water play that morning. This was the first time that A had told the researcher or any adult in the room that she wanted to sit by a child at snack other than her sister. Unfortunately A and her sister were absent for the next two weeks due to illness and then a week for spring break. When A came back, she continued to increase her level of social interaction. She was starting to play physically closer to other children and was now verbally responding to them. While there was no further incidents of co-operative play, there was an increase in parallel play accompanied by verbal interaction.

The graduate student felt that, given a situation where A could perform at a level above or at the same level as the other children without having to talk, she was more likely to interact with the children. As in the case of the sand and water play, A was able to contribute something by being able to open

the nozzle on the water container. Only in situations that demanded verbal communication in order for the play to occur, such as dramatic play, was A likely to feel frustrated and, for that reason, therefore totally avoid the situation.

A's mother felt that the change in social behavior was due to speech therapy. At home, A was talking more and was more willing to share information on what she had done at both of the preschools she attended. Instead of just responding to her mother's questions, A initiated conversations and directed them. However, the segregated school felt that A no longer needed to be involved in a speech therapy program even though her parents had specifically requested that the speech therapy continue.

Summary

Child A, a verbal five year old child diagnosed as having Down's Syndrome and considered to be mildly retarded, attended the intergrated preschool two mornings a week. From observations taken over a four month data collection period, a description of the content of A's play and the processes involved was constructed. Observations of free play patterns indicated that A made choices from play activities independent of the adults in the room. A chose to play in specific areas of the preschool and increased the number of areas in which she played over the observation period. Her use of toys and materials in the room can best be termed as 'appropriate' in that her play did in no way distinguish A from the other children. Observations revealed a high level of problem solving behaviors in A's play. Child A's symbolic play was an imitation of adult activities or roles. She was not observed in any

fantasy or socio-dramatic play in the preschool. Observations collected indicated that A had few interactions with other children in the preschool although the number of interactions increased over time. Both A's mother and the graduate student felt that the inability of others to understand A's speech was, at the very least partially, responsible for the limited social interaction observed.

CHAPTER FIVE

CHILD B

Introduction

This chapter provides a description of the content of Child B's play in the integrated preschool at the University of Manitoba. The chapter is divided into four sections which examine the following areas of play: Free Play Pattern, Toy Play and Use of Materials, Social Play and Self-Directed Behaviors. The data for each of the sections were broken down into three, five week intervals of observation time. The third observation interval was six weeks long, due to the spring break which occurred during this time period.

For Child B, the category of Symbolic Play was replaced with the category of Self-Directed Behaviors. This substitution was necessitated by the absence of symbolic play exhibited by B. This does not preclude that B has not engaged in symbolic play at home or in other situations, however, symbolic play was not observed in the preschool.

Child B

Child B is a 2 1/2 year old who has been diagnosed as developmentally delayed. She produces words, although according to her parents, production is inconsistent. She was assessed as having a developmental age of 18 to 21 months according to the Yale Developmental Scale. Child B wears glasses to correct poor vision as well as special lifts in her shoes as a corrective measure. B

had recently had intensive hearing tests that indicated that she had no hearing loss. At one point during the study, she was taking mega vitamins in an attempt to facilitate speech though her mother stopped giving them to her as she felt they were causing her to become hyperactive.

Child B attended the integrated preschool two mornings a week with her brother and a four year old neighbour. Apart from attending this program, she was enrolled in an integrated toddler program and a special olympic gymnastic class. B's parents also worked with her at home using the Portage Developmental Program. They encouraged B to make different sounds and use words.

Child B's mother felt that she was a frustrated child due to the fact that she was nonverbal. Her mother was particularly concerned about B's tendency to withdraw into herself. At an earlier point, B was not making eye contact with anyone though at the start of the study she was making eye contact with certain individuals (i.e., her parents and brother, one of the graduate students, one of the three teachers and the researcher). B's mother hoped that B would start to respond to people by looking at them when they called her and would stop turning away when people came near her. B's mother thought that once B began to respond to the people around her, B's ability to learn would increase and would result in her becoming less frustrated.

In conversation, B's mother revealed that the two major objectives for B's attending the preschool were to develop language and social skills. B's mother saw the major barrier to B's development as a lack of social interaction with people and hoped that the preschool would encourage B to start interacting with the children and adults in her environment.

Based on their written observations, the graduate students stated that B

was both withdrawn and frustrated. They were concerned about her lack of eye contact and her failure to respond to people when they initiated an interaction with her. However, they noted that if B wanted something, she did not hesitate to interact with one of the graduate students. For example, she climbed on a lap with a book when she wanted a story read or took hold of someone's hand when she wanted to clap hands. Concern was also expressed over behaviors that B displayed that were considered to be inappropriate. These behaviors included mouthing toys, running up and down the hall, waving of hands in front of her face and spinning. After further observation and conversation with B's mother, these behaviors were identified as coping behaviors. The graduate students stated their major objectives were to facilitate both language and social development.

To meet the objectives of B's mother and the graduate students, an individual program was implemented. The program was designed to facilitate integration and to encourage verbalization. The program involved activities both in and outside the classroom.

A picture of B's play in the preschool was constructed using the following anecdotal observations with indirect observations interspersed where appropriate,

Free Play Patterns

First Observation Interval (January 3 - February 4, 1983)

B entered the classroom with her mother, her brother and a four year old neighbour. Most days B's mother informed the graduate student and the researcher about B's morning, and usually the three spent some time discussing

B's behaviors. During this time, B clung to her mother's legs and rocked her body back and forth. She also took hold of her mother's hands and tried to walk up her. When her mother left, B opened the door and ran out down the hall usually with a graduate student running after her. When she was brought back, the graduate student took B to an area in the room and gave her a toy. For about the next twenty or thirty minutes, B moved around the various centers of the room, stopping to pick up toys to and look at them.

Approximately twenty minutes to thirty minutes after she arrived, B was taken out of the room for her individual program. This program generally took about ten minutes and was followed by a walk around the Education Building for another ten minutes.

When B returned to the preschool, she moved around the room stopping in the various centers of the room to examine or manipulate an object she had found. Often she went from the book corner to another area and then returned to the book corner before going on to the next center. Frequently B brought a book to the graduate student or the researcher and climbed up on her lap to have the book read. By the end of the observation interval, B started to open doors and run down the hall to the locker room where she ran up and down the aisles of lockers.

During clean-up time, B was taken to the bathroom and for walk in the halls, followed by snack in the preschool with the other children. During quiet time, the graduate student working with B read her books while encouraging other children to join them. If a singing and dancing session followed, B attempted to leave the room or turn off the record player. Usually the graduate student took her and another child for a walk. When this observation interval ended, B was not willing to stay in the room after snack and for the

most part was crying and being carried up and down the hall by the graduate student or the researcher. Her mother arrived at the end of the session, and most days B was willing to go home.

Second Observation Interval (February 2 - March 11, 1983)

B entered the preschool with her mother, brother and neighbour. The graduate student working with B and the researcher talked with her mother about B's activities that morning. B usually stayed near her mother during these conversations. She held her mother's legs as she swayed back and forth or held her mother's arms as she climbed up her body. When her mother left, B either went to an area in the preschool or opened the doors and ran down the hall to the locker rooms.

During this observation period, B spent most of her time in the preschool trying to get out of the room. She cried for long periods of time. The graduate student attempted to calm her down by taking her out of the room for walks around the Education Building. According to the graduate student, B rarely stopped crying during one day and spent most of her time being carried up and down the halls. B's mother stated that B was also spending long periods of time at home crying and wanting to be held.

About half an hour after arriving, B was taken out of the room for her language lessons. Returning from this activity, B again spent most of her time trying to leave the room to run out in the halls.

B did not participate in the clean-up though on most days she did have snack with the other children. During this observation session, B spent the majority of the last part of the morning outside of the preschool accompanied

by either or both the graduate student and the researcher. If B remained in the classroom during the last part of the morning, she spent her time reading books or interacting with the graduate student and the researcher.

Third Observation Interval (March 14 - April 22, 1983)

Upon entering the classroom, B stayed close to her mother while she talked with the graduate student and the researcher. After her mother left, B went to an area in the room to play. During this observation interval, B usually did not attempt to leave the room for the first half an hour. B still left the room about half an hour after she arrived for her individual language lesson. Following the lesson, B returned to the room where she played with toys in various parts of the room. B's number of attempts to leave the room decreased during this observation session. When she did leave the room, she was allowed to run to the water fountain and have a drink of water before being brought back to the room or to run for a short period of time in the locker room.

B still did not participate in clean-up time. Instead, during this time she was taken to the bathroom. She sat with the other children to have snack. During this interval, B remained in the room reading books during quiet time, followed by a walk outside with the other children or alone with the graduate student and the researcher.

An adult was with B for most of the time in the classroom, either in the near vicinity or directly interacting with her. Most of the toys that B played with were directly given to her by adults, however, this activity was observed less frequently during the third observation period. B also positioned herself close to the graduate student working with her and became quite upset if the

graduate student left the room. Often during her play, B stopped her activity to go over to the graduate student for a hug and kiss.

Toy Play and Use of Materials

First Observation Interval (January 3 - February 4, 1983)

While in the preschool, B spent a great deal of time moving back and forth between the various centers to be found in the room. At times B moved continuously, stopping only to pick up an object, and manipulate it. B then went back to moving around the room. The book corner and the climber were the areas that B was observed in the most often, and it was in these areas that B spent time involved in some form of activity or play. Other areas that she frequented were the water table, sand table, and the puzzle area; however, her time spent in these areas was shorter in comparison to that spent in the book corner and on the climber.

Based on observations taken during the first interval, B used a limited number of toys in the classroom. Most of the toys that she used were ones that allowed for a cause and effect reaction. She played with the pop up toys, cash register, musical instruments, rocker and water toys. For example, B stood beside the rocker pushing it up and down as she visually explored its movements. She looked under, in and at the rocker as she moved it.

The objects that were most frequently chosen by B were books. B either brought a book to the graduate student or the researcher to read with her, or else she looked at the book on her own. When reading with an adult, B took hold of one of the adult's fingers and pointed to the various pictures in the

book. The adult then provided the appropriate label. B usually chose the same two books, both counting books. The other children in the preschool were aware of this behavior and would refer to them as "B's books".

Observations revealed that B did not play with toys that encouraged symbolic play nor did she use toys in symbolic play. That is to say, she was not observed dressing up in the dress-up clothes, using the shopping cart, playing with dolls or using any of the toys that were commonly used by the children in the preschool as part of their symbolic play. The exception to this play pattern, is that she used a puppet; however, it was used in a non play fashion. B took the puppet into the book corner and mouthed the hand of the puppet. This behavior was observed frequently in the first observation session.

B was observed mouthing objects as a method of exploration; however, this was not her only method of exploring an object. She visually explored objects, turning them over while looking at the various attributes of the objects. B also manipulated objects as part of her exploration of them. Concern was expressed by the graduate students that B's mouthing of objects was inappropriate for a child of her age. Conversation with her mother and based on the graduate students' own observations, they concluded that mouthing was both a method of exploration as well as a coping behavior. B's use of mouthing as a 'coping behavior' will be discussed later in the section dealing with self-directed behaviors.

Second Observation Interval (February 2 - March 11, 1983)

There was little change observed in B's toy play behavior during the second observation period. The most significant difference observed was in the length of time she spent in the book corner. While books were still the most frequently chosen toy in the preschool, B often removed them from the book corner. It is important to note that, during this observational interval, the teachers moved the book corner to another part of the room. It was now located in an open area as compared to the closed space it had been in previously.

B continued to spend the majority of her time in the preschool moving from place to place. Areas frequented most often by B were the store, where the cash register was located, the climber, the large climbing cube, and the open area located in the second half of the room. This open area, located near the sand box, was situated in the middle of the areas in which B most often played.

During this observation interval, as mentioned previously, B spent a considerable amount of time outside of the preschool. Once outside of the room, B either went to the water fountain or into the women's locker room. As a result, they became part of her daily activities. At the water fountain she attempted to get a drink of water. This procedure involved A's turning on the water and then bending over for a drink. B spent a considerable amount of time endeavoring to keep the water on as she bent over to get a drink. More often than not, she was unsuccessful in her attempts, and in a loud voice, she verbalized her frustrations to the water fountain. In the locker room, B would run up and down the rows of lockers. This running was done with her legs bent

at the knees, her body tilted away from the lockers and her hand nearest to the lockers touching the lockers as she ran.

B was observed selecting toys that allowed for a cause and effect reaction. For the most part toys were selected that B had used in the first observational interval. It was also observed that she had not changed her mode of manipulating toys. She pressed the same two knobs on the pop up toy, she would shake the bells, holding them in her right hand, and she banged on the same side of the bongos. The graduate student working with B introduced her to a small hand mirror, and this object became a frequently selected toy. She held the mirror in front of her face and flipped the mirror back and forth.

During this observation interval, B spent considerable time outside of the preschool. As a result, observations of her toy play and use of materials were fewer in number when compared to the other two observation intervals.

Third Observation Interval (March 14 - April 22, 1983)

There were observable changes seen in B's toy play and use of materials during the third observation interval. First, B was observed interacting with new materials in the room. The most noticeable of these interactions was the sand box. Whereas the graduate student had physically placed her in the sand box, B was now observed entering the sand box without adult intervention. While B was not observed using her hands to play with the sand, she was observed using her feet. She leaned against the wall supporting herself with one hand while she kicked the sand with her feet. B also used her feet to smooth out the sand. She would walk around the sand box and stop to push the sand with her feet. B was observed going up to the posters on the wall and

exploring them both visually and with her hands. Other toys with which she was observed interacting for the first time included the pieces puzzles, the shopping cart and the large play car.

There were some some observable differences seen in B's mode of exploration and manipulation of objects. First, mouthing was no longer a predominant method of exploring an object. B was observed exploring objects visually and using her hands to manipulate objects. She turned the object over and around as she viewed its physical characteristics and then manipulated the objects's parts. One could infer that she was attempting to get a reaction from the object as a result of her exploration of it. A discussion between the graduate student and the researcher yielded the hypothesis that B tended to select toys that allowed for a cause and effect reaction, and that new toys were tested for the same reaction. In terms of manipulation of objects, B was observed expanding her actions when interacting with a familiar toy. Where B was observed previously pressing the same two knobs on the pop up toy, she was now observed pressing all four. The rocker became a toy not only to explore but to sit in and rock. New books were being selected though the two counting books were still selected most often. The graduate student and B's mother also observed a change in this area. It was felt that though this change was slight, it was a step forward in B's interaction with objects and overall development.

Self-Directed Behaviors

First Observation Interval (January 3 - February 4, 1983)

During the first observation interval, B exhibited a number of self-directed behaviors in the preschool. These behaviors included rocking, holding her hand in front of her face while moving fingers, spinning her body, running with her body tilted to the right and holding her hand in front of her face, falling to the ground and landing on her knees and hands, mouthing the hand of a puppet and sitting on her legs and squeezing her feet.

There was no specific pattern for the occurrence of B's self-directed behaviors. These behaviors were exhibited during her other play activities although B was observed to be engaged in self-directed behaviors at a higher frequency in the time period just preceding snack and in the last fifteen to twenty minutes of the morning. B also displayed self-directed behaviors when she was frustrated. For example, frustration would result if a child took something from her or if B was unable to open the door leading out of the preschool.

The graduate students expressed concern over what they considered to be a "high frequency of inappropriate behavior". After further observation and conversations with B's mother though, they concluded that these behaviors were B's method of coping. B's mother was concerned that if B was unable to perform these self-directed behaviors, B would again withdraw. B's mother felt that these self-directed behaviors provided B with a mechanism by which she was able to cope with situations that proved to be frustrating for her.

Second Observation Interval (February 7 - March 11, 1983)

Observations collected during this interval indicated a decrease in some of the self-directed behaviors, specifically mouthing, rocking and squeezing of her feet. No decrease was observed with regard to B's running with her body tilted to the right with her hand in front of her face, spinning or holding her hand in front of her face while moving her fingers.

Observations revealed that while self-directed behaviors occurred throughout the day, they were observed as having a higher frequency right before snack and just before she left for home. It was also observed, as in the first observation interval, that B engaged in these behaviors when she was in a frustrating situation.

As the second observation interval progressed, it was observed that B's running had increased. She was now leaving the room to run up and down the hall just outside of the preschool. In the halls, she ran close up to the wall with her body tilted and her hand in front of her face. B was also going into the locker room at the end of the hall where she ran up and down the aisles of lockers. B's mother commented that B had also increased her running at home. She felt that this was becoming a safety hazard as B was "not watching where she was going". B's mother was concerned that the mega vitamin therapy may be responsible for this "hyperactive behavior" and decided to discontinue the therapy.

Observations gathered during this interval indicated that B was spending an increasing portion of her time crying. B's mother also reported an increase in crying. As well, B was not sleeping at nights. B's mother again suggested that the vitamin therapy may be partly responsible. She hypothesized that the

hyperactivity was resulting in B's not being able to sleep. The crying, according to B's mother was a by product of the lack of sleep as well as other minor health problems like a cold.

It should be noted that B spent a greater portion of her time outside the room during the second observation interval than she did during the first and third periods. In order to comfort B, both the graduate student working with B and the researcher walked outside the room carrying B and singing to her. Similar comforting behaviors were done at home by B's mother and father when she cried and proved to be effective in soothing her. Occasionally at the end of the morning, B fell asleep while being carried.

Third Observation Interval (March 14 - April 22, 1983)

The third observation interval revealed a continued decrease in B's self directed behaviors which included running, spinning and waving her fingers in front of her eyes. Again, as in the previous two observation intervals, B's exhibited the most self directed behaviors during the time period before snack and just before it was time to go home.

As mentioned previously, running was observed less frequently during this observation interval. B rarely ran in the room although she occasionally left the classroom to run down the hall or to run in the locker room. The graduate student felt that B 'needed' to run and allowed B to run for a while, but then directed her back to the class. It should be noted that the number of times B left the classroom decreased over the observation period.

B's crying was observed to decrease rapidly from the beginning of the observation interval while around the middle when it stopped almost entirely.

B's mother attributed the decrease in crying to the discontinuation of the mega vitamin therapy and to the fact that B was now sleeping nights. The graduate student felt that B appeared to be "happier" and was "smiling more".

A new self-directed behavior did emerge during the third observation interval. This behavior involved B's flipping a small hand mirror and repeating her name or sounds. During the last two weeks of the observation interval, B could be heard repeating her name and sounds as she walked around the room. This repetitive babbling was viewed by both the graduate student and B's mother as a positive step. B's mother found that B would imitate her sounds if she presented them in a repetitive manner. It should be noted that B was also beginning to use a few one word utterances.

Social Play

First Observation Interval (January 3 - February 4, 1983)

Observations taken during the first observation interval indicated that B's social interactions were mainly limited to two of the adults in the classroom, the graduate student who was responsible for B's individual program, and the researcher. B initiated interactions with these two adults although the majority of the interactions were with the graduate student. B was observed to take books to one of the adults, to play beside one of the adults with toys that she had carried from another area in the room, and to climb up on the lap of the adults.

As was mentioned previously, the majority of B's social interactions took place with the graduate student responsible for her individual program.

Observations revealed that the graduate student was the individual whom B went to if she needed comfort. B exhibited far more coping behaviors when the graduate student was not in the preschool. The graduate student was aware of this effect and felt that B needed to have one principal adult in the classroom to be able to interact with her. The graduate student based this conclusion on her observations of B and her perceptions of B's difficulties in functioning in a large group of children. The graduate student felt that as B developed and became more confident in her environment she would expand her interactions to include other adults.

During this observation interval, B was not observed initiating interactions with other children in the preschool. The social interactions between B and other children that were observed were initiated by the other children. When children approached B to initiate an interaction, B usually did not respond to the initiation, and on occasion turned from the child or got up and walked off. In one instance, a child who had expressed interest in B to both the graduate student and the researcher attempted to read B one of the counting books. B's response to this overture was to pull the book away and cry. The child then explained to B that she would read the book to her and tried to pull B onto her lap. The graduate student intervened and tried to assist; however, the episode ended with B's walking away. Positive social interaction were observed between B and her brother in the classroom. These interactions were characterized by brief games of peek-a-boo initiated by B's brother. During these interactions, B babbled, laughed and imitated her brother's actions.

B's mother expressed a great deal of concern over what she felt to be B's lack of interest in other children. Her mother felt that interaction with other

children could facilitate B's cognitive and language development. The graduate student, while concerned over the lack of interactions observed between B and other children, was more concerned over the observed "indifferent" attitude exhibited by B towards other children. The graduate student stated that, due to B's chronological age and level of development one would expect to see 'limited co-operative interactions'. However, she felt that B should be responding more positively when other children initiated interactions with her.

Second Observation Interval (February 7 - March 11, 1983)

Observations taken during this observation interval indicated that the majority of B's social interactions still occurred with the graduate student and the researcher. However, B was observed initiating interactions with one of three early childhood teachers. While these interactions were infrequent at the beginning of this observation interval, they were observed to be more frequent by the end of this interval.

As mentioned previously, B spent a great portion of time outside of the classroom during this time period. The graduate student and the researcher spent much time in one on one interactions with B. It was observed that B was more active in these interactions, taking the adult's hand and clapping them, watching the adult as she talked, coming up to the adult and leading her to some location. This action was in contrast to what were more passive interactions in the first interval of observation.

Interactions with other children were still initiated by other children. Although B did not respond to the interaction, she no longer reacted by crying or turning away. Her interactions with her brother remained the same though it

was observed that they were more frequent and longer in duration. The biggest observable difference occurred at the end of the second observation interval. B was now observed watching the play of the other children and playing beside other children. Earlier observation showed B playing beside either the graduate student or researcher, or by herself. She began to play in a group of children. While there was no verbal interchange, B often stopped and watched what the other children were doing, she was not observed imitating the actions of any of the children except her brother. The graduate student and her mother felt that B's onlooker behavior was an indication of improvement in B's development. It should be noted that this change occurred at the end of the observation interval, when B was spending more time in the classroom. Her mother felt that stopping the mega vitamin therapy could have played a role in this change of behavior.

Third Observation Interval (March 14 - April 22, 1983)

The third observation interval indicated further observable changes in B's social development. Although the majority of interactions still took place with the graduate student and the researcher, these interactions were fewer and shorter in duration. B initiated a greater number of interactions with all three of the early childhood teachers; however, these interactions were still infrequent.

The graduate student remained the adult that B went to if she wanted comfort, and the graduate student felt this behavior was 'normal' for a child of B's chronological and developmental age. The graduate student felt that B was now more secure in the preschool, and, as a result, she was now

interacting with more of the adults in the room.

Observable differences were exhibited by B in terms of child-child interaction. B was observed spending more time in areas where children were playing, she observed the play of other children and was starting to respond to the initiations of other children. She took toys that other children wanted to give to her, smiled in response to the verbalization of the other children, and took toys from other children. Again, it should be noted these behaviors were still infrequent, and B was often observed not responding to some initiations. Based on the data obtained, it appeared that B responded positively to specific children and ignored the initiating behaviors of the other children in the classroom. The children that initiated play which was of interest to B seemed to be more likely to cause her to respond. For example, a child who brought B one of her counting books, the pop up toys or the musical instruments seemed to get a response. It was observed that specific children seemed to be aware of B's "favorite toys" and made an effort to bring them to her. It was to these children that B was more likely to respond positively.

Summary

Child B is a non-verbal 2 1/2 year old who has been diagnosed as being developmentally delayed. She was assessed as having a developmental age of 18 to 21 months according to the Yale Developmental Scale. Observations of B's free play patterns indicated that she played in various areas of the preschool as well as outside of the classroom. The amount of time B spent outside of the preschool decreased over the four month observation period. B's use of toys was explorative in nature, and she generally chose toys that allowed for a

cause and effect reaction. Based on the observations collected, B's social interactions with other children were limited. The majority of B's interactions took place with the graduate student and the researcher. However, by the third observation interval, B was observed responding more positively to other children in the preschool. B exhibited a number of self-directed behaviors in the classroom. These behaviors were termed coping behaviors by B's mother and the graduate student working with B. It should be noted that there was a decrease in the number of self-directed behaviors exhibited by B over the four month observation period.

CHAPTER SIX

Child C

Introduction

This chapter provides a description of the content of Child C's play in the integrated preschool at the University of Manitoba. The chapter is divided into four sections and examines the following areas of play: Free Play Patterns, Toy Play and Use of Materials, Symbolic Play and Social Play. The data for each of the sections were broken down into one observation interval of five weeks and a second interval of four weeks. The time periods for Child C differ from the other two children, because Child C began the preschool six weeks after the study had started.

Child C

Child C is a 2 1/2 year old who has been identified as having developmental delays, the causes of which are unknown. At the beginning of the investigation, he was assessed at a developmental age of 15 months according to the Yale Developmental Scale. C wears glasses to correct vision problems that were diagnosed a month before he started attending the preschool.

Child C was enrolled in the preschool on February 17, six weeks after the study had begun, and attended two afternoons as week. This was his first experience in a preschool environment. At the time of the study, the University Preschool was the only program that C was attending. C's family, in particular his mother, worked with him at home, encouraging speech and other behaviors. The home program was designed by C's mother in conjunction

with the child care worker who made regular home visits.

C's mother described C as a happy child who was very much aware of the people and events in his environment. She felt C possessed a great deal of potential to develop cognitively if he were given the right amount of encouragement and a stimulating environment. C's mother noted that as an infant, C had suffered from a variety of medical problems, and this situation probably contributed to his 'slow development'. Child C's family lived outside the city of Winnipeg, and there were few preschool children living near by. C's mother was concerned that C's limited contact with peers could result in further developmental delays for C, particularly in terms of social and verbal skills. C's mother felt that C needed regular contact with nonmentally handicapped children who could serve as role models for C. She felt that contact with peers would encourage "appropriate behavior" on the part of C as well as stimulate speech.

In conversation, C's mother stated that the major objectives for C's attending the preschool were to develop language and social skills. C's mother felt that C's environment was lacking peer interaction and that the preschool provided C with the opportunity to interact with other children.

Based on their written observations, the graduate students stated that C lacked "appropriate social skills" as a result of having few interactions with other children. They noted that C had positive social play interactions with adults. The graduate students observed that C was beginning to use one word utterances and attempting to repeat the speech of an adult when a label for an object was said. For example, if one of the graduate students said, "C, that's a car.", C tried to say car. They felt that these attempts were encouraging signs regarding C's language development. The graduate students

working with C stated that their major objectives were to encourage positive social interaction between C and the children in the preschool as well as to increase C's language production.

The following anecdotal observations, with indirect observations interspersed where appropriate, will construct a picture of C's play in the preschool.

Free Play Patterns

First Observation Interval (February 17 - March 18, 1983)

C arrived with his mother approximately five minutes before the preschool started. After having his jacket taken off by his mother, C entered the room and went directly to the adults in the room and greeted them with a "Hi!" and a kiss. The researcher usually talked to C's mother for a few minutes either inside or outside of the room. These conversations usually revolved around the progress of C and other matters related to his development.

C, after greeting the adults in the room, usually went to one of the centers in the end of the room which contained the house corner, play car, sand box, water table, store and climbing equipment. C spent the majority of his time before snack playing in this part of the room during the first observation interval. The house corner, store, car and the climbing equipment were the areas where C most frequently played. C moved back and forth amongst the aforementioned areas, usually with one of the graduate students following him.

In the beginning part of the first observation interval, the graduate

students joined in and sometimes directed C's play. This behavior was used, according to the graduate students, both as a means of gathering information and as a way of developing a relationship with C. During the latter half of this observation interval, and after an individual program had been developed, the graduate students worked with C for two, ten minute periods on language.

Clean up in the preschool occurred about an hour and half after C arrived. C participated in this activity under the supervision of a graduate student. Snack followed directly after clean up, and C, for the most part, ate snack with the other children. There was some concern expressed over C's desire to bring a toy to the table and his tendency to leave while he was eating.

Snack was followed by a quiet time in which the children were required to choose an activity in a specific part of the room. During this time, C usually worked with an adult in some activity, i.e., puzzle, lego, reading books. The last fifteen minutes of the day was a circle time at which time the children sang songs and danced. C participated in these activities with the assistance of one of the graduate students. C's mother arrived at the end of the session, and most days C was willing to go home.

It is important to note that the first observation interval was for C his first experience in the University preschool. During this time period, C was familiarizing himself with the materials and people in the preschool environment. As well, the early childhood teachers and the graduate students were attempting to get to know C. For the graduate students, this acquaintanceship period, involving both observation and direct interaction with C, resulted in a high level of adult intervention in C's play in the classroom. During the first two weeks C attended the preschool, there was an adult either directly interacting with him or seated nearby. The adult presence caused C's

pattern of movement in the preschool to be highly structured by adult intervention.

Second Observation Interval (March 21 - April 22, 1983)

C arrived at the preschool with his mother and entered on his own after his mother had taken off his outer clothing. C went directly to the adults in the room and greeted them with a "Hi!" and a kiss and hug. C went to the back of the room and started to play in one of the centers. The car, house corner and climber had become the areas in which C most frequently played, though C had now begun to play in the other part of the room using the typewriter and the tape recorder in the office.

In addition to the activities and experiences that were provided for all the children in the preschool, an individual program was developed for C by the graduate students so that the objectives of his mother and the graduate students could be met. Specific activities were introduced by the graduate students during free play to encourage speech. These activities included the labelling of pictures and objects in the room. The graduate students encouraged C's interaction with other children whenever possible. The graduate students explained to the researcher that they intervened when they felt that C's social behavior was inappropriate and tried to encourage him to behave in a more socially acceptable way. For example, if C were to take a toy away from a child, the graduate students encouraged C either to wait his turn or to share the toy with the other child. The majority of the researcher's observations indicated that the graduate students' principal method of intervention was to remove C from a situation when inappropriate social

behavior was exhibited.

Snack and cleanup followed the first play session, and C was encouraged to participate in both these events. A graduate student assisted C in putting the toys away and in having snack although C needed relatively little help in having snack according to the early childhood certification students.

Quiet time came directly after the children had finished their snack. The children were encouraged to choose activities in a specific part of the room. These activities included art, puzzles, table toys and books. C, with adult assistance, involved himself in some quiet activity. The table toys and books were the activities most frequently selected by C. A circle time was held during the last ten minutes of the day. All the children were required to participate and again, C with adult assistance, joined in this activity.

Adult assistance was not a result of C's inability to participate in these activities, but rather the graduate students felt that their presence encouraged C to behave in a more appropriate manner. As a result, C's play in the room was still quite structured in the second observation interval. C's play often ended as a result of adult intervention. For example, C was supposed to wear a smock when playing at the water table; however, C refused to do so. Whenever there was an attempt made to put the smock on C, he would often leave the water table. It should be noted that the other children in the preschool were not required to wear smocks when playing at the water table. When C encountered any difficulty in social situations, (i.e., taking a toy from someone or difficulty in sharing a toy), the graduate students intervened. At times that intervention resulted in C's being removed from the play and directed into another activity. This type of intervention technique contributed to increasing the structure of C's play, while limiting actual observations of

free play as defined by the researcher.

Toy Play and Use of Materials

First Observation Interval (February 17- March 18, 1983)

Based on the first five weeks of observations, C's toy play and use of materials can be described as 'appropriate' with 'appropriate' being defined as C's not displaying mouthing, throwing materials or indiscernible manipulation-behaviors that some of the literature has suggested to be common to mentally handicapped children. What emerged from the researcher's observations was that C used materials and toys as props in his play. C was also observed exploring the characteristics of a toy or object to discover its various properties. Once exploration was completed, the toy became a prop in his play. Both the graduate students and the early childhood teachers commented on C's ability to use toys in what they termed to be a "productive manner". The graduate students noted that C appeared to know "how to play" with the toys found in the preschool.

Most of the materials and toys with which C interacted during the first observation interval were found in the one particular area of the room. These objects included the climbing equipment, the house corner, the car and the store. The climbing equipment used by C were the rocker, the tires, the large climbing frame, the cube and the horse. C was observed frequently sitting in the rocker with other children and standing beside it while moving it up and down. The tires and the horse were used to climb on and under, and these

behaviors generally occurred in the presence of other children. The large climbing frame was used by C to climb through the ropes on the bottom, to push the swinging rope, and, with assistance from an adult to climb. C climbed in and out of the holes of the large climbing frame though C did not attempt to climb to the top. Most of C's play on the climbing equipment occurred when there were other children using the equipment and C was observed imitating their behaviors. For example, when the parachute was placed on the climber, a group of children began hiding underneath the climber and sticking their heads out from under the chute. C was also observed doing the same things. Unfortunately for C, he got tangled up in the parachute, and one of the graduate students had to pull him out.

The house corner was an area where C was frequently observed playing. C used most of materials found in the area as part of his play. Dishes were used for eating, dolls for kissing and putting to bed, the phone for talking on, and the appliances, sink, stove and refrigerator, for putting things on or into. The first toy with which C interacted in the preschool was the telephone. C spent approximately the first fifteen to twenty minutes of his first day at preschool with the phone. He picked up the receiver, held it to his ear, then gave the receiver to the nearest adult. The adult then talked on the phone before saying that the phone was for C. Using this game with the phone, C came into contact with the majority of the adults in the room.

The car was observed to be the most frequently chosen toy by C and the toy from which he was most frequently removed. C climbed into the driver's seat and then put the key in the ignition before 'driving away'. When driving, C turned the wheel and made car noises. The word car quickly was added to C spoken vocabulary.

Other materials with which C was observed interacting were the water table, sand box and table toys. Again these toys were used in a manner that can be described as appropriate in that C used the toys and materials as their characteristics suggested they should be used. C did not climb into the sand box as the other children did. Rather he sat outside of it and played with the sand from there. One of the graduate students attempted to place him in the sand box, and C reacted by crying and immediately climbing out.

The graduate students and the early childhood teachers commented on how C used toys and materials in a manner defined by the toy. The phone, for example, was used for talking on, and he did not substitute other objects to be used as a phone. For the most part, objects were used in accordance with their characteristics and were not used to represent other objects.

Second Observation Interval (March 21- April 22, 1983)

During the second observation interval, C continued to exhibit appropriate use of toys and materials in the preschool. C's mother commented that C was functioning well in the preschool in terms of his interaction with materials and toys.

Although the areas where C most frequently played were found in one part of the room, he was now expanding his play to include materials in the other part of the room. The one part of the preschool included the materials C generally used as props in his play while the other end of the room provided C with materials for exploration and experimentation. Explorative behavior was observed frequently in C's use of the typewriter and tape recorder. With the tape recorder, C pushed the buttons until something happened such as the tape

ejecting or music starting. In using the typewriter, C again pushed the various keys until he got some form of result. After some use of the machine, C was able to "type", and use the return handle and the fast forward key. As well, if the typewriter needed paper, he asked for "pape" to be put in it. By the end of the term, C was attempting to put the paper in himself. If the adult adjusted the paper in the wheel, C was able to turn the handle causing the paper to move around the wheel to the proper place for typing.

Explorative behaviors were also observed in C's use of the cash register, some of the table toys and the water table. As with the typewriter and tape recorder, C pushed various buttons on the cash register until something happened. With exploration, he learned how to open the cash register and ring the bell. Other toys which he was able to use in an similar manner included the spinning top, pop up toys and dominoes. C was introduced to dominoes by one of the graduate students who lined them up for him one day so C could knock them over. C attempted to set them up although he failed to realize they had to be placed in a row and then knocked over.

Observations also revealed that C was expanding his repertoire of behaviors with other toys and materials. For example, at the water table C was now pouring water from cup to cup as opposed to simply pouring the water back into the water table. He also used straws to blow bubbles. In the last weeks of the second observation interval, C was observed using a spoon to put water in a cup instead of using the spoon just for stirring.

C was observed imitating the behavior of the other children, particularly in the climbing area. One day a group of boys were playing 'SUPERMAN' and were running back and forth between the climber and the tires, and then crawling behind the cube. C ran with them and attempted to climb through and

around the equipment. C was stopped from doing this activity as he began to make "loud noises" and became aggressive in his play. The aggression was being shown by his pushing other children. It should be stated that the other children appeared to the observer to be as equally as noisy and aggressive.

Symbolic Play

First Observation Interval (February 17 - March 18, 1983)

Based on the first five weeks of observation, C's symbolic play was typified by imitation of adult activity. C played out scenarios of these adult activities which he most likely had had previous experiences. C served the researcher "coffee" as she sat at the kitchen table in the house corner; he answered the phone when an adult made the noise of a phone ringing, and kissed the "baby" (doll) goodnight when he put her to bed. C was not observed in a dramatic or fantasy play situations, those situations that involved make-believe. C did not put on a cape to become "SUPERMAN" or fight off "DRACULA" whereas the other children in the room were involved in this type of play at one point during th observation period. C watched the other children in their play and often played in the area in which the dramatic play was occurring; however, he was not observed to be overtly involved in the play. From the observer's perspective, C appeared to be, at times, treated like a younger sibling who wanted to join in but, as yet, was unable to discern exactly what it was that everyone was doing.

The car was a toy that elicited a high amount of C's symbolic play. C sat

in the driver's seat, put the key in the ignition, turned the 'motor on', and made car noises. C then drove the car, turning the wheel and making noises as he drove around. One little girl frequently went for drives with C, but she always sat in the passenger seat. Generally little conversation took place between the two although she told the researcher that she and C were going somewhere.

One symbolic play episode, involving the researcher occurred during the first observation interval. C was pressing the buttons on the cash register when the researcher entered the store and sat down beside him. C responded to the researcher by saying "Hi" and turning around to a shelf, pretending to pick something off the shelf and hand it to the researcher. C then pressed a button on the cash register and repeated the same actions. This game continued until C had handed the researcher about six "items. C then said "Bye" and began pressing the buttons on the cash register. The scenario involved little verbalization on the part of C. The researcher attempted to make comments, such as "Thank you" when an "item" was given to her, or "Can I have some more". The researcher's verbalizations were met with a smile.

Symbolic play was observed regularly during the first observation period according to the researcher's observations although it was not the most frequent form of play observed. The symbolic play observed, except for the play that took place in the car, included only C, himself, or an adult in the room. As well, it should be noted that the symbolic play, for the most part, was short in duration and revolved around the use of a toy. There was no acting out of a specific situation, other than store, observed.

Second Observation Interval (March 21 - April 22, 1983)

During the second observation interval, C continued to exhibit symbolic play in the same manner as in the first observation interval. Most of the symbolic play occurred in the end of the room in which the house, store and car were located. There appeared to be a slight decrease in the frequency of symbolic play according to the observations recorded; however, this change could be due to the increase in time C spent in the other end of the room which involved other forms of play.

There were three noticeable differences observed in C's symbolic play during this observation interval. The first difference was C was expanding his symbolic play to include more props. For example, when driving the car, he now brought along a purse. Sequencing of actions was becoming more pronounced in C's symbolic play. When he entered the car, he said "Bye", put the purse down beside him on the seat, put the key in the ignition, turned the key, and moved the steering wheel. When he had finished his drive, he took the key out of the ignition, picked up his purse, got out of the car and said "Hi".

Thirdly, C was attempting to encourage other children to join in his car play. When a child walked by the car, C, using his hand to touch the passenger seat, told the child to "Sit". These initiations were met with both positive and neutral responses. A positive response was when the child sat down and neutral response was considered to be the child's continuing to walk.

Social PlayFirst Observation Interval (February 17 - March 18, 1983)

Observations taken during the first observation interval indicated that most of C's social interactions occurred with adults. When C entered the preschool, he went directly to the adults in the classroom and greeted them with a "Hi" and a kiss. C was frequently observed attempting to involve the adults in the room in his play by taking their hand, telling them to "Come", and bringing them over to his play. Both the graduate students and the early childhood students stated that they were concerned that C may be too adult oriented and should be encouraged to play more with the other children in the classroom. The researcher's observations indicated that C was frequently attempting to involve adults in his play; however the involvement was generally in an observation capacity. By observation it is meant that C played and the adult watched and responded when C showed the adult an object or made a verbalization. Often while observing C, the researcher indicated knowledge of C's activities with a verbal response but did not directly participate in the play. Observations indicated that the adults responded to C's initiations by coming to the place C wanted, making a verbal comment, and then moving away from him. C's mother commented that at home C liked to have one of his parents or siblings in the room when he played, not necessarily to play with him but to watch and make verbal comments on his actions in play.

Onlooker behavior and parallel play were frequently observed during the first observation interval. C was observed to stop his activity and look in the

direction of the play of other children. According to the observations recorded C observed the play of the boys more often than the play of girls. Observations revealed that C played close to other children, but closer to the boys than the girls.

While cooperative play with other children was not observed during this observation interval, C imitated the play of the other children though he was not part of that play. For example, three boys were playing "SUPERMAN" and climbing in and out of tires chasing the bad guys. C also began to climb in and out of the tires; however, he was not part of their play because he did not have a role to act out, such as Superman, as did the other children in play.

C's social interactions with other children were frequent during this observation interval although they were short in duration. The graduate students also felt that these interactions were more often negative than positive in nature. Hitting, pushing and an inability to share toys were characteristic of C's social behavior according to the graduate students. The researcher's observations also revealed similar behaviors although they were not judged to be either negative or positive, but rather behaviors that were responses to a situation. C was observed pushing a child over so that he could get in the driver's seat of the car or taking a toy that he wanted for play, or grabbing back a toy that was taken from him. C's mother felt that these behaviors were a result of C's limited previous interactions with other children and that he lacked a verbal alternative to the physical behaviors he used.

Second Observation Interval (March 21 -April 22,1983)

Observations taken during the second observation interval indicated that

C was still attempting to include the adults in the classroom in his play. C was observed calling to adults to "Sit" with him while he played, or he would take their hands telling them to "Come" with him. The graduate students indicated in conversation that C relied too much on "them", and they felt that they should decrease the time spent actually playing with C. They stated further that C's behavior demanded that they remain nearby to intervene when appropriate. This action resulted in what they felt to be a double bind. On the one hand, they wanted to afford C as much independence as possible, but, on the other, C needed intervention to improve his social skills.

Based on observations taken during the second observation interval, C increased his level of parallel play. C spent more time playing in areas that contained other children although solitary play was still observed. One of the graduate students wondered if this behavior was not so much his desire to be with other children as C's desire to play with the toys that were most popular in the room. The car was cited as an example, C played in the car regardless to the presence or absence of the other children. Onlooker behavior was observed more frequently during the second observation period as was imitation of the other children's behaviors, specifically that of the other boys in the room.

Social interactions with other children increased throughout the second term. The majority of these were still short in duration and often outside the realm of play. Instead they were more often than not disputes over property rights or taking turns. The graduate students were concerned that C was having too many negative interactions with the other children. Observations revealed that these behaviors, while occurring in all parts of the room, were at their highest in the area of the room where the play was generally more

aggressive and dramatic for all the children.

Summary

Child C is a 2 1/2 year old male who has been identified as having developmental delays of unknown cause. C was assessed at a developmental age of fifteen months according to the Yale Developmental Scale. He attended the integrated preschool two afternoons a week, and this was his first experience in a preschool setting. From observations taken over a nine week period, a description of the content of C's play and the processes involved was constructed. Observations of his free play patterns indicated that C's play was restricted as a result of adult intervention. During the first observation interval, C's play most often occurred in one end of the preschool. His play was expanded in the second observation interval to include the other part of the room. C's use of materials in the room was appropriate in that he was able to incorporate the available toys into his play. Observations also indicated that he was able to incorporate novel materials into his play through exploration and experimentation. C's symbolic play involved the use of objects in imaginative play, and symbolic play developed throughout the nine weeks to play that involved the beginning of role playing and sequencing of actions. Observations of C's social play showed that C interacted with adults at a greater frequency than with his peers. The observations collected during the second observation interval showed an increase in the amount of interactions that C initiated with the other children in the preschool. He exhibited both positive and negative behaviors in his interactions with the other children. The majority of the negative interactions revolved around the use of a toy and

occurred in the one section of the classroom.

CHAPTER SEVEN

Interpretations

Introduction

The purpose of this study was to investigate the content of play of mentally handicapped children. Specifically three children who had been identified as mentally handicapped and who attended the Integrated Preschool at the University of Manitoba, were selected as subjects for this study.

A review of anthropological studies indicated that young children play in one form or another in all societies of the world (Schwartzman, 1976). These play activities afford children the opportunity to explore their environment and develop cognitive and social skills (Abernethy, 1974). This investigation has examined some of the processes involved in the play of mentally handicapped children. The method, ethnography, utilized hand written observations, indirect observations, photographs and video recordings to investigate the content of play found in three mentally handicapped children in an integrated preschool setting.

The following sections are an interpretation of the observations obtained in relation to the literature reviewed which pertained to the play of mentally handicapped children as well to relevant literature which examined the play of nonhandicapped children. Implications and conclusions suggested from the interpretations of the data will be discussed in the following chapter.

Toy Play and Use of Materials

The literature dealing with the toy play and use of materials suggested that stereotypic and repetitive play activities are common to the play of mentally handicapped children. In comparison to the play of nonhandicapped children, mentally handicapped children's use of materials is less imaginative, and the materials and activities most frequently chosen impose a set pattern of behavior. Oral manipulation and pounding of materials and toys were also cited as behaviors exhibited in the play of the mentally handicapped children. Observations of the toy play and use of materials of the three children in this ethnography revealed both similarities to and discrepancies in the behaviors described by the available literature.

Child A was not observed engaging in oral manipulation or pounding activities, nor was her behavior stereotypic (e.g., throwing toys) of mentally handicapped children. The graduate students and the early childhood teachers in the preschool frequently commented on A's appropriate play behavior and on her ability to use the materials and toys found in the classroom as props in her play. A was able to explore the characteristics of a toy, experiment with that toy in play, and apply the knowledge she had gained in an attempt to use the toy in the manner she wished it to be used. Observations taken indicated that some of the materials chosen by A did impose a set structure although it was observed that A also chose materials that allowed her to play creatively (e.g., sand, water, the climbing equipment, art materials). Repetitive play activities were observed in A's play in that she consistently chose to play with certain materials in specific parts of the room. However, it could be suggested that this situation was due to her possible desire to avoid play with other children

as a result of her speech difficulty rather than because of her developmental delay. This suggestion results from observations which show that, although the same materials were frequently chosen, the play with specific toys differed from observation to observation.

Child B was observed in frequent oral manipulation and close visual tactile examination of materials as well as pounding materials and toys. Her use of materials was observed to be repetitive in nature and could be described as stereotypic in comparison to the behavior of the nonhandicapped children in the preschool. Examination of the content of these activities suggests that these behaviors were part of B's method of exploration. Oral manipulation became less frequent as it was replaced with more tactile examination of toys. Increased exposure to a toy decreased the level of stereotypic behaviors, and more appropriate behaviors were observed. For example, indiscriminate hitting of the guitar was replaced with B's fingering the separate strings of the guitar. A study on the development of manipulative play by Fenson, and others (1976) revealed that this progression from oral and visual examination to a more tactile manipulation and interest in the physical and functional relations among toys was a developmental progression in the child's play. The child becomes involved in cause and effect relations. The examination of cause and effect relations were frequently observed in B's use of materials in the latter part of the investigation. In ethological terms, B was progressing from an explorative response to a material to a play response.

Based on observations taken during this ethnography, Child C's toy play and use of materials can best be described as appropriate. Stereotypic behaviors, such as oral manipulation and pounding of materials, were not observed in C's play. Tactile examination and visual examination of materials

were observed although these behaviors decreased as C's amount of exposure to a toy increased. This behavior was clearly exhibited in C's use of the typewriter where the play went from indiscriminate touching of keys, to experimenting with specific keys, to using the machine to type. This series of behaviors shows a development in play as outlined by the ethological sequence of responses- exploration, play and application (Garwood, 1982).

Repetitive activities were observed although C increased his repertoire of activities as the investigation progressed. Observations of his free play patterns indicated that as he expanded his play to include other parts of the room, he increased the number of toys and materials in his play. Repetitive behavior could be the result of C's need to practice the skills he was developing in his play and to familiarize himself with a novel environment.

In summary, the toy play and use of material by the children in ethnography revealed some behaviors consistent with the research. Also evident were developmental trends in their play as indicated in the research in the play behaviors of nonhandicapped children. These findings are in agreement with the statement that mental retardation is a delay in development: individuals labelled mentally handicapped pass through the same stages as the nonhandicapped population only at a slower rate (Crawley and Chan, 0982, Field, and others, 1982, and Woodward, 1959).

Symbolic Play

The literature reviewed which dealt with the symbolic play of mentally handicapped children suggested a relationship between cognitive and language development and the presence of symbolic play. Wing, and others (1977) state

that symbolic play is only observed in children who have a nonverbal mental age and language comprehension level above the nineteen month level. The researchers continued by writing that children who do not engage in symbolic play are severely limited in their ability to learn. Of the two children who were observed to engage in symbolic play, only one child had a developmental age above nineteen months. Child A had a developmental age of 3 1/2 to 4 years while Child C had a developmental age of fifteen months. Child B, who was not observed in symbolic play, had a developmental age of eighteen months.

Child A, based on the data obtained, engaged in symbolic play which revolved around the imitation of adult activity which was detailed in terms of language and gesture. Her symbolic play can be described as role substitution (McCune-Nicolich, 1981) as it was a representation of her observations of certain adult activities. A was also observed planning her symbolic play (i.e., "I'm going to make a pizza".) A was not observed in group symbolic play or fantasy play in the nursery, except on three occasions, two in which A and her sister were baking cakes and making pizzas in the sandbox, and once with another child on the climbing cube. A's mother has observed A involved in group symbolic play and fantasy play with her younger sisters at home. It is suggested that the other children's inability to understand A's speech resulted in A's lack of participation in the group symbolic play and fantasy play within the nursery with children other than her sister.

Symbolic play was not a regular feature of A's play according to the written observations obtained. This finding could be interpreted as being related to A's developmental delay; however, research in the areas of nonhandicapped children's symbolic play is relatively low in frequency when

compared to other forms of behavior. The range of symbolic play as a percentage of total play is cited by the research to be 10 to 17 percent in preschool groups, increasing to 33 percent in kindergarten groups (Rubin, Maioni and Hornuna, 1976, Rubin, Watson and Jambor, 1978 and Singer, 1973).

Child C's symbolic play, as observed in the preschool, ranged from the separation of an activity and object from a real life setting (i.e., drinking coffee from an empty cup) to the beginnings of role playing using various objects as props and the sequencing of actions in play (i.e., getting into the car, waving good-bye and "driving off" with purse at hand). C was observed attempting to involve adults in his play, as well as directing some invitations toward other children to join in his play. However, these invitations should not necessarily be judged as true group symbolic play, but rather as parallel play as there were no roles assigned nor was there any degree of verbalization between C and the other children during this play.

Symbolic play activities were regularly observed in C's play though they were not observed as frequently when compared to other activities in which C was observed participating. However, this finding is consistent with the research that suggests that symbolic play has a lower frequency than other forms of play activities in young preschool children.

In summary, both Child A and Child C were observed to engage in symbolic play in the preschool. Role substitution, sequencing of actions and planning of the play were evident in the observations of A's symbolic play. Sequencing of actions, separation of activity and objects from real life settings and the emergence of role playing were observed in C's symbolic play.

Self-Directed Behaviors

Self-directed behaviors have been found to be a common feature in the repertoire of children who are moderately or severely handicapped (Field, and others 1982). Child B was observed to engage in self-directed behaviors in the preschool, and they also occurred interspersed among other play activities. The frequency of these types of behaviors increased at certain times during the morning, particularly in the time period preceding snack and the time period preceding leaving for home. These behaviors were also observed at a higher frequency when B was frustrated (i.e., B could not get the door opened), or when the graduate student working with B was not present in the preschool. Both the graduate student and B's mother interpreted these behaviors to be Child B's method of coping.

The observations obtained in this investigation supported the notion that B's self-directed behaviors could be a method of coping. The frequency of these behaviors decreased in the presence of the graduate student with whom B developed a close relationship. The self-directed behaviors also decreased when B was provided with an opportunity to leave the classroom. Based on the observations, it appeared that B had certain behaviors for specific emotions. A frustrating situation for B resulted in tense, physical movements and handflapping while the absence of the graduate student evoked oral manipulation,

In summary, the content of B's self-directed behaviors indicated the possibility that these behaviors resulted from B's frustration or 'unhappiness'. The use of such behaviors, while providing B with a method of coping, also could be termed a form of nonverbal communication that expressed her

emotions to the people in her environment.

Social Play

Research pertaining to the social behavior of mentally handicapped children suggested that their play is often delayed or solitary in comparison to the social behavior of nonhandicapped children. Data obtained by some researchers indicated that increase exposure to nonhandicapped peers and integrated settings has a positive effect on the social play of mentally handicapped children. The observations of the social play of the three children recorded during this investigation revealed both similarities and differences with regards to the literature.

Child A's play, for the most part, was either solitary in nature or in a parallel play situation. A was observed in two cooperative play situations. This statement does not suggest that only two instances of cooperative play occurred, but rather that only two such situations with children other than her younger sister were observed by the researcher. There were instances of interaction with other children, as well as one observation that showed two other children attempting to involve A in their play. The majority of A's interactions with children were in the nature of asking for an object, disputes over the use of an object or toy, or A's response to a question posed by another child. These interactions with other children increased over the observation period. A's mother stated that she observed A in cooperative play situation at home with A's younger sisters and other children well known to the family.

The majority of A's social interactions with adults were with the

researcher and the graduate student working with her. A responded to other adults when they initiated conversation. The observations taken indicated that these interactions between A and other adults were often brief in duration and involved A's answering questions made by the adults although there were some instances of lengthy play interactions between A and other adults. A was observed initiating conversations with the researcher and inviting the researcher to join in her play.

The materials that A played with and the areas within the preschool in which she was observed lent themselves to solitary play. Sand, water, puzzles, art activities and books are areas that the researcher has suggested may inhibit social contact and encourage solitary and parallel play (Hulson 1933, Kawin 1934, Markey 1938, Murphy 1937, Quilitch and Risley 1973, Updergraff and Herbst 1933, Van Alstyne 1932). A was not observed playing in areas such as the house corner and the blocks which are areas, according to the research, that encourage social contact.

The data revealed limited social interactions between A and the other people in the classroom. However, examination of the observations of social interactions indicated a communication problem between A and other people in the preschool. Both the children and the adults in the classroom expressed difficulty in understanding A's speech and often asked A to repeat what she had said or simply told her that they were unable to understand what she was saying. Both A's mother and the graduate students felt that A's inability to speak clearly was a major barrier in her social interactions with other people, and the written observations supported this position.

B's social interaction, according to the written observations obtained, was limited. The majority of B's interaction occurred with the graduate student

working with B with whom she had formed a close relationship. As mentioned previously, B's self-directed behaviors increased in number when the graduate student was not present in the preschool. B was observed interacting with other adults in the room, specifically the reseacher and one of the early childhood teachers. If the graduate student was absent, B went to one of these two adults; however if the graduate student returned, B would go directly to her.

Social interactions between B and the other children were infrequent. When they did occur, they were brief and were initiated by the other child. B's interaction with other children generally involved another child bringing her a toy or trying to interest B in something that the child was doing. B's response to the children was often to walk away or to begin crying or some other self-directed behavior. Over the observation period, this behavior changed, and B began to respond in a more positive manner such as smiling, watching the other child, or taking the toy that was offered to her. B was observed to respond to her brother throughout the observation period although her brother interacted with her infrequently.

B's social behavior was consistent with the research reviewed on the social play of mentally handicapped children in that her play was solitary. However, her social behavior was in agreement with the study done by Field and others (1982) where it was found that children progress from play with adults, to play with toys, then to play with other children. B was observed to increase the level of her play with toys, and there was an increase in onlooker behavior. B responded more positively to children as time went by and began playing closer to the play of other children.

Observations of C's social behavior revealed that he initiated more

interactions with adults than with children though the number of interactions which he initiated with other children increased over the investigation. This finding again is consistent with the study done by Field, and others (1982). C's play with other children was often aggressive in that he pushed other children, was unable to share, and took toys from other children; yet C was also observed smiling at other children, saying Hi! when a child walked by and generally expressing interest in other children (e.g., watching their play, playing in areas where other children were). Research in the area of social play of nonhandicapped children suggests that the types of materials used by children in their play influences their social behavior (Hulson 1930, Kavin 1934, Markey 1938, Murphy 1937, Quilitch and Risley 1973, Updergraff and Herbst 1933 and Van Alstyne 1932). According to the research, the types of materials and the areas in which C played- house corner, climbing equipment, and the car- elicit social interactions between children. Johnson's (1935) research indicated that in areas where the equipment available encourage social behavior, it also resulted in more observations of aggressive play, teasing, quarreling and crying. It could then be suggested that some of the aggressive behavior observed resulted from C's being in such a situation. As well, C's limited previous contact with peers, and the fact that the investigation took place during his first two months in a preschool setting, could have influenced the behaviors observed.

The observations indicated that C was often removed from social situations where aggressive behavior was occurring. This type of intervention was used both in situations where C instigated the aggression or another child started the aggressive behavior. There were few instances of observations that showed the problem to be resolved by C. Of the instances observed, when the

adults did not intervene, the disagreements were generally resolved by the children themselves.

The data obtained on the social behavior of the children were generally consistent with the literature. Analysis of the content of the play offered data that suggested that the behavior of Child A may have been a result of a speech difficulty, the materials she used, and the areas in which she played. Child B's social behavior was consistent with the notion of a developmental delay in that she was delayed in her social play; yet she was progressing from contact with adults, to toys, and was beginning to make peer contact. Observations indicated that Child C chose to play in areas of the room which the literature suggested encouraged high level of social contact and aggressive play. Interpretations of C's social play should also consider that the period of data collection was C's first experience in a preschool environment.

Summary

This ethnography provided data that were both consistent and in disagreement with the literature pertaining to the play of mentally handicapped children. Evident within the investigation, as suggested by the observations, were developmental progressions and behaviors similar to those reported in the research examining the play of nonhandicapped children. Specifically, two of the children exhibited play behaviors that were considered appropriate as well there was evidence of developmental progressions in the two children's play that the research has suggested to be common in the play of nonhandicapped children. The third child was observed to be engaging in stereotypic behaviors, but appropriate toy use did emerge as the investigation

progressed. Two children were observed in symbolic play. While the symbolic play was low in frequency, when compared to their other play activities, this observation is consistent with the behaviors of nonhandicapped children. Both children expanded on their symbolic play during the study, exhibiting sequencing and planning behaviors in their play. One child was observed in self-directed behaviors, and based on the observation obtained, these behaviors were felt to be the child's method of coping. All three of the children were limited in their social play, which is consistent with research dealing with the play of nonhandicapped children. However, all of the children increased their levels of interaction with other children over the period of data collection. Also evident within their social play were behaviors and developmental progression that the research has suggested to be common in the play of nonhandicapped children.

The implications of this ethnography , as well as the limitations of the study, will be discussed in the following chapter.

CHAPTER EIGHT

Discussion

Introduction

Play is a process by which a child is free to explore and experiment within his environment. Goals found in the play, if any, are defined by the player and often are not known to an observer. A child in play can recreate past experiences, incorporate past learning and develop new cognitive skills. Play, then is a behavior that is begun, directed and ended by the player alone. A researcher investigating play should examine the behavior of a child in activities that the child himself has chosen. Thus, the researcher is able to observe both the processes involved in the play and the content of play. Investigations that restrict a child's behavior or put a child in a situation where his activities are limited to one set of materials that have been chosen by the researcher are studies of child behavior in task specific situations and not investigations of play. Research that examines play of mentally handicapped children should be designed to incorporate methodologies that investigate play as it occurs naturally.

This study, conducted in an integrated preschool in the Faculty of Education, University of Manitoba, focused on the play behaviors of three children labelled mentally handicapped. The research was designed to examine the processes involved in the children's play and the content of their play. Ethnography was the method of investigation because it allowed the researcher to examine play in a natural setting without the constraints of a highly

structured observational system. The methodology allowed the researcher to gather information on play behaviors and events occurring in the environment, and then to reconstruct a picture of three children's play. The ethnographic approach was subject to a number of limitations, which are described in the following section.

Limitations of the Ethnography

This ethnography employed the technique of participant observation as the principal instrument for gathering data. George McCall and J.H. Simmons (1969) identified three major limitations found in participant observation: "1) reactive effects of the observer, 2) distortions in observations and 3) limitations on what the observer can witness". (p.104) In terms of this present investigation, the researcher did develop relationships with the three children. The researcher also recognizes that these relationships could have influenced her interpretations of the data and could have distorted her perceptions of the behaviors observed. With regard to the third limitation, as noted by McCall and Simmons, the researcher recognized she was not able to observe all of the three children's play behavior that occurred in the classroom. As well, in the process of observing the children's play, the researcher was, occasionally, interrupted by other people in the preschool. These interruptions resulted in her missing some of the behaviors of the children.

To decrease the effect of these three limitations, as described by McCall and Simmons, a four month data collection period was employed. The threat of biased selection of behaviors was reduced by increasing the length of time used to gather the data.

The investigation was also subject to time limitations. First, while a four month period of data collection was adopted, absences on the part of the children decreased the number of observations recorded. Second, Child C did not attend the preschool when the investigation began. This decreased the time available to collect data on Child C.

Play behaviors of the children were observed only in the preschool. This fact of data collection presents a further limitation in that the data can only be discussed in terms of play behavior observed in that one setting.

A final limitation of this particular study is the researcher, herself. Wolcott (1975) describes the ethnographer as the main instrument employed in ethnographic research. The qualities that the ethnographer brings to the study both enhance and place limitations on the investigation.

In summary, this investigation is faced with a variety of limitations as a result of the methodology employed. However, the advantages of and the appropriateness of ethnography, as a method of investigation to the problem to be examined in this study, are thought to outweigh the limitations.

Summary of the Results

This investigation produced data that allowed the researcher to examine the processes involved and the content of play of three mentally handicapped children in an integrated preschool setting. Interpretations of the data indicated that the children exhibited some behaviors that were consistent with the findings of the literature pertaining to the play of mentally handicapped children. Further examination of the play behavior observed suggested the presence of certain developmental progressions that were found in research

studies investigating the play of nonhandicapped children. The presence of developmental progression in the play of the three children is consistent with the notion that mental retardation is a delay in development.

Data collected from both direct and indirect observations indicated that the play behaviors observed may have been influenced by variables other than mental retardation. The level of intervention by adults, speech difficulties of the children, the materials used by the children in their play, the areas in which the children chose to play, the length of time the children had been in a preschool setting are among the variables that may have influenced the behaviors observed in the children's play.

Implications

There are several implications in the results of this investigation. First research that adopts methodologies which allow for the investigation of developmental progression should be encouraged. Second, the observations in this research indicated a need for research that examines the effects on play of such variables as setting, available materials and levels of adult interaction. Finally, research in the area of play of the mentally handicapped population should take place in naturalistic settings whenever possible.

Developmental Progressions

Several studies have provided evidence to support the notion that mental retardation is a delay in development (Crawley & Chan, 1982; Field, and others, 1982; Odom, 1981; and Woodward, 1959). These investigations have

demonstrated that play behaviors of mentally handicapped children emerge in a sequence similar to the nonhandicapped population but at a slower rate. Further research in this area could generate evidence to support or negate this notion.

A possible limitation of the available literature pertaining to play of mentally handicapped children is that the majority of the studies have looked at improving the quality of their play as opposed to documenting naturally occurring developmental progressions (Crawley & Chan, 1982 and Weham, 1975). Brook and Baumiester (1977) stated that research in the area of mental retardation focused primarily on the introduction of a new task or procedure with the mentally handicapped population and consequently have not increased our understanding of mental retardation. Research that documented developmental changes could generate information that would provide investigators with an increased understanding of the phenomenon of mental retardation. This understanding would, in turn, be useful for the development of appropriate methods for enhancing the play of mentally handicapped children. Sax (1968) wrote that:

Basic research has too often been neglected and overlooked by those intent upon improving educational practice...Unless there is a background of theory and empirical research to back up some proposed educational innovations, it may be necessary to evaluate every whim and fad in the public schools to see if they work (p. 33).

With the availability of research that constructs a developmental framework of mental retardation, appropriate intervention strategies can be empirically constructed on the basis of that framework (Wehman, 1975).

Influencing Factors on Play

The type of preschool environment facing a child may have a significant role in terms of learning and development (Bronfenbrenner, 1979; Chamberlian, 1968; and Frymier, 1965). A preschool in which the majority of materials available are puzzles, books, art equipment and table toys will, according to the available research elicit different behaviors than a room filled with climbing equipment, blocks and dramatic play materials. The placement of the toys and the equipment in a classroom and the physical setting of the room can determine which materials a child selects to use in play, length of time the child is involved in play, how the child manipulates the materials and whether or not the the child expands on the play activity (Johnson, 1935; Kritchvesky & Prescott, 1969; Nash, 1981; Quilitch & Risley, 1973; and Sommer, 1969). The type of adult intervention, interaction and direction has been found to effect the behavior of nonhandicapped children in their play (Griffing, 1983; Hymes, 1968 and Nash 1976). Anaylsis of the observations of this study suggest the possibility that there are similar variables within the environment of mentally handicapped children that will effect the play behavior exhibited in the preschool.

Educators have attempted to attain an optimal learning environment within their classroom. This notion of an optimal environment can also be discussed in terms of play. If play is to be viewed as an important part of a child's development, then the environment in which that child is placed, should support and encourage play behaviors. Research is needed to examine what variables within the environment encourage and reinforce play behaviors of mentally handicapped children. Additionally McCune-Nicolich (1977) states that

there is a need for further research into the effects of the setting on the level of play.

Studying Play in a Naturalistic Setting

Brandt (1972) suggested that there are often inconsistencies to be found between laboratory experimentation and naturalistic investigation. With the "complex matrix" of a real-life setting, phenomena may operate differently than in the controlled and narrow environment found in the laboratory (Willems, 1969). Research that examines play in a laboratory setting then faces the question of external validity.

Researching the behavior of the nonhandicapped population suggested that the environment where the play occurs may influence the behaviors exhibited by the children (Gump, Schoggen & Redl, 1957; and Gump & Sutton-Smith,). Studies that take place within the child's environment are then able to investigate the variables within that setting that influence or elicit play behaviors. It would follow, then, that research should investigate play behaviors of mentally handicapped children as they occur naturally in the child's own environment.

This investigation took place in a natural setting and observations recorded revealed that several factors may have influenced some of the play behaviors exhibited by the children. In response to the presence of these possible factors, it is suggested that further research should examine the mentally handicapped child's behavior in a variety of naturalistic settings, such as home, preschool, and other informal and formal programs. Gump, Schoggen and Redl (1963) suggest that research examining the behaviors of children,

should record their activities in settings that are typically entered into by the child. The authors stated that children live in "milieus and behavior settings" and that the impacts the setting has on the child should be understood, and scientific methods of selecting and designing settings should be developed.

Summary of Implications

The results of this ethnography suggested three main implications: 1) the need to investigate developmental changes in play; 2) the need to examine variables within the environment that influence and reinforce play behaviors; and 3) the need to focus on play in a naturalistic settings.

Several other implications also resulted from the examination of data obtained in this investigation. The first was the need to evaluate individual differences when looking at the play of mentally handicapped children. The frustrating social interactions previously experienced by Child A as a result of her speech difficulties were considered when discussing her present social behavior. Child C's limited past experience with other children and his lack of experience within a preschool environment were factors that were recognized when interpreting his behavior in the classroom.

All three children, at one time or another during the study, were taking medicine to either combat an illness or for reasons related to their handicap. Two of the children were attending more than one program. Child B, for example, attended four separate programs, and Child A attended three programs. Reports from these two children's mothers on their children's fatigue which resulted from their attending a number of programs was common. Two factors, illness and fatigue, were variables that may have contributed to some

of the behaviors observed in the preschool and must be taken into account when interpreting the behavior of the children.

The observations of this investigation suggest that recognition should be extended to events and phenomena that occurred outside the preschool for the individual child. The recognition of external variables and individual differences could promote a better understanding of the reality faced by the mentally handicapped child.

Conclusion

Play is a behavior that is pleasurable, spontaneous and voluntary (Garvey, 1977). Mark Twain wrote that "Work consists of whatever a body is obliged to do...Play consists of whatever a body is not obliged to do" (Greene & Lepper, 1974). The importance of play to the cognitive and social development of a child has been documented by numerous studies. For the child who is mentally handicapped, play is also a vehicle for cognitive growth and development (Tizard, 1960). To enhance the quality of play, research should investigate the development of play in the mentally handicapped population, the factors that influence play, and the settings in which play naturally occurs.

McConkey and Jeffree (1981), as a result of their work with mentally handicapped children, write that, through observations of the child's behavior the educator can design appropriate interventions to assist the child in his play. Research in the area of play of the mentally handicapped population should adopt this suggestion. Investigations that combine both qualitative and quantitative methods of data collection would provide information that is both empirical and descriptive in nature. Through an increased understanding of the

processes and changes that occur in the play of the mentally handicapped child and the setting in which that play occurs, educators and parents could be able to develop environments and intervention strategies that stimulate play behaviors in a manner which is appropriate and meaningful to the child.

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APPENDIX 1
Letter of Permission

January, 1983

Dear Parents:

The purpose of this letter is to request your permission to allow your child to participate in an investigation of children's play.

This study is designed to look at the play of mentally handicapped children in an integrated preschool setting. Your child will be observed in the preschool once a week during free play periods. Observations will be made through the use of written records, video-tapes and photographs.

The information obtained from this study will be treated in a confidential manner. Please feel free to contact me if you have any questions, or if you wish to discuss the study.

Please indicate whether or not you wish your child to participate by completing the permission slip and returning it to the preschool. Your cooperation is greatly appreciated.

Yours sincerely,

Kathleen MacKenzie

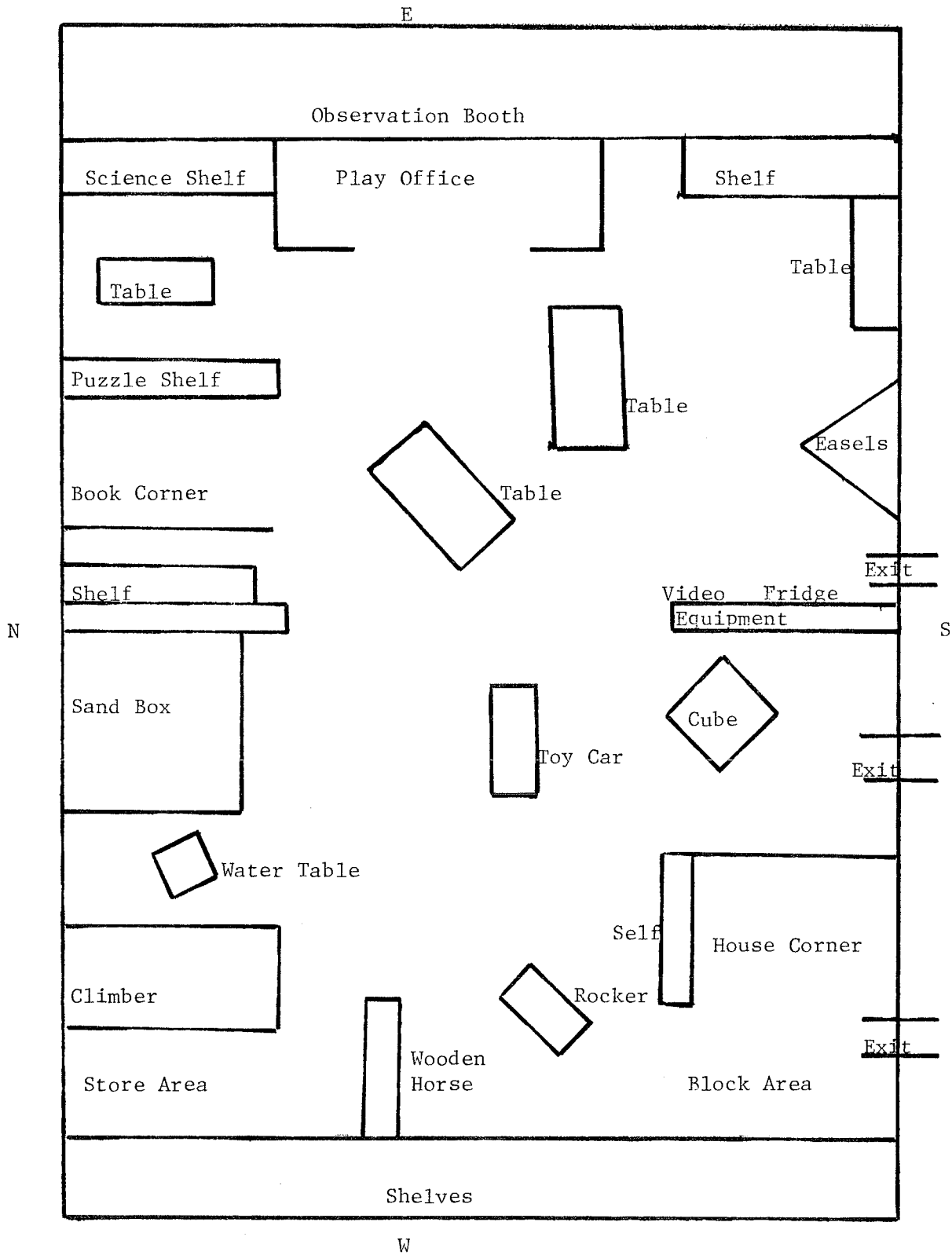
(256-6542)

I _____, give my permission for my child, _____, to participate in the study of play at the University of Manitoba Integrated Preschool.

APPENDIX II

Physical Set Up Of The Preschool

University Integrated Preschool Setting (1983)



APPENDIX III
Examples Of Original Data

EXAMPLES OF ORIGINAL DATA

First Observation Interval (3/1/83 - 4/2/83)

Child B

(3/1/83 - 9:07)

B enters the preschool with her mom and the graduate student(P). The graduate student and B's mother stand near the door. B stands in front of her mother as she moves her fingers back and forth in front of her face. B stops waving her fingers and runs out of the preschool, her mother leaves and brings B back into the room. B's mother and the graduate student show B the pictures of the children in the classroom, B turns and runs out of the room. The graduate student, goes and brings B back into the room (B is holding the graduate students hand, and B has her knees bent, body leaning to the right and is waving her fingers in front of her face). The graduate student picks up B and begins to sing 'Old McDonald Had A Farm". B turns and looks at the graduate student and then takes hold of her hair. B runs her fingers through the graduate students hair as the graduate student sings to her. The graduate student carries B to the book corner and picks up the counting book which she then reads to B.

(11/1/83 - 9:36)

B is sitting in the book corner reading the counting book. The graduate student and the researcher are sitting on chairs just outside the book corner. Another child enters the book corner, turns to the two adults and tells them that she is going to read with B; the child then sits down beside B. Both B and the other child sit side by side as B continues to look at the book (B does not look at the other child. The graduate student enters the area and asks B if she wants to read with the other child. The other child responds that she wants to read the book called the The Night Kitchen, and goes and brings the book over beside B. B continues reading, while the graduate student reads the The Night Kitchen to the other child. B stands up, drops the book on the floor and walks over to the graduate student. B then takes the graduate students hands and starts to clap them. The other child starts to clap her hands; B turns and looks at her then walks back and picks up her book.

(18/1/83 - 10:17)

B is standing by the rocker pushing it up and down with her right hand. One of the early childhood teachers and other child come over to the climber. The teacher suggests that both children can get in the rocker. The other child climbs in as the teacher lifts B into the rocker. B sits in the rocker moving both her hands in front of her face as the teacher moves the rocker up and down. The teacher asks B to hold on with one hand, B responds by doing so. The teacher and the other child start to

talk about what's going on in the classroom. B looks at the teacher as she continues waving one hand in front of her face.

(1/2/83 - 10:55)

B opens the door of the preschool and runs down the hall towards the doors. The graduate student and the researcher follow her out of the door and stand watching her in the hall. B continues running until she is about two thirds of the way down the hall. She stops and falls on her knees to the ground with her hands out in front of her. B sits up on her knees and hits the ground with both hands. B stands up and turns towards the preschool then runs back, past the graduate student and the researcher till she reaches the doors at the other end of the hall. B puts her hands on the door with her finger spread out. She then turns and walks to the table against the wall. B stands in front of the table, then walks to the chair beside the table, which she uses to climb up on the table. She sits on the table looking the direction of the graduate student and the researcher. B gets on her knees and turns facing the wall; then she lays down with her legs hanging over the side of the table. She attempts to place her hands on the edge of the table. She pulls her legs up and crawls to the far end of the table. She again lays down and has her legs hanging over the table. B puts her hands out in front of her and grabs the edges of the table. She moves her feet as she moves her body off the table. Once down from the table, she runs back down the hall. The graduate student picks her up and swings her around and takes her to the bathroom

Second Observation Interval (7/2/83 - 11/3/83)

Child A

(11/2/83 - 9:17)

A is in the book corner, sitting on a pillow holding the book in a teacher like position (A is using one hand to hold the book out in front of her and is bent over to look at the pages). The researcher is unable to hear her as she points to various pictures and verbalizes as she does so. A puts down the book and picks another off the shelf and repeats the same actions.

One of the graduate student (J) and another child (M) enter the book corner and sit down beside A. J tells A that she likes to listen to stories. A holds the book out to J and asks her questions about the pictures, J responds. This behavior continues till A hands J a book and J starts to read a story to both children.

(11/2/83 - 9:55 a.m.)

A walks over to the art table where M and J are blowing bubbles. E, one of the early childhood teachers, asks A if she wants to "make some bubbles". A sits down at the end of the table, picks up a wire hoop wand and pulls a bowl of soap in front of her.

Using her left hand to hold the wand, A tips the soap bowl with her right and dips the wand in. Lifting the wand up to her mouth, A blows causing bubbles. A puts the wand back into the soap. This time, after removing the wand from soap, A waves the wand to make bubbles. A turns to where the researcher is sitting, "Look, I'm making some bubbles".

A continues making bubbles, alternating between waving the wand and blowing into the wand to produce bubbles. Successful attempts are met with either "I got it" or "I got it. All those bubbles".

A stands up and walks to the other end of the table where she picks up another wand, ("Better one") and takes it back to where she was sitting. A puts the wand into the soap, and tries to blow a bubble. "No work " she says, and goes back to the other end of the table and returns with a new wand. A puts this wand in the soap and is met with success. A makes several more "Bubbles" before leaving to play on the climber.

(25/2/83 - 10:14)

A has been playing at the art table, mixing sand and water for the last fifty minutes. Various children have come and played at the table during the fifty minute time period. At this point A and her younger sister, K, are the only children playing at the table, and the researcher is the only adult present.

A is stirring a mixture of sand and water in a large bowl using a wooden spoon. A lifts the spoon out of the bowl and taps the spoon on the side of the bowl, causing sand particles to fall back into the bowl. A puts the spoon back into the bowl and begins mixing using both hands to move the spoon in large, circular motions. A places the spoon on the table and picks up the egg beater that K has just put down. She mixes the mixture using the beater; then A takes the beater out of the bowl and taps on the side of the bowl before placing the beater back on the table. A takes the spoon in right hand, lifts the bowl with her other hand, mixes the mixture in small circular motions.

A "I need some more sand."

K "Go get some."

C enters and puts her hand on the bowl A is using and says "That's my bowl. C then picks up the beater and starts mixing the sand and water.

A "Make sand", as she picks up the spoons she was previously using and starts to stir in the bowl with C.

C "This is going to be a good cake."

C and A continue mixing together in the same bowl, until C leaves and returns with a spoonful of sand from the sand box. A then goes to the sand box and returns with a baby food jar filled with sand. A picks up a

small spoon and spoons the sand into the bowl. Once most of the sand has been removed, A holds the jar upside down over the bowl and scrapes the rest of the sand out of it.

P, a friend of C's, enters, and C tells her to help A stir, which she does by picking up a spoon and starting to stir the mixture with A.

A "Need more sand", as she picks up the baby food jar and goes to the sand box. A returns with the jar filled with sand and tells C and P that, that is her bowl.

P "You can help. Are you making for me or helping."

A mumbles something and pulls the bowl closer to her.

P, turning to the researcher, "Sounds like she said helping".

A picks up a cup and spoon and goes over to the sand box. She returns with the cup filled with sand. "A's sand, I got sand", then empties the contents of the sand into the bowl.

"You've decided on that one?" P asks A. P then picks up a small plastic spoon, and starts to stir the contents of a smaller bowl. "We have to stir a lot", P tells the researcher.

A moves her bowl closer to her and, then moves it further away from P.

C "You and A can bake your cakes together. Then we will have more cakes. If you need this one ---- more time, I'll give it to you" (It is presumed that C was talking to P; however, neither P or A looked up at C while she was talking or responded to her.

P picks up a large water container and starts to pour it into her cup and in the process gets herself quite wet. She asks the researcher to help clean her up. The researcher agrees and both leave the area.

Second Observation Interval (21/3/83 - 22/4/83)

Child C

(22/3/83 - 1:03)

C enters the preschool with his mother. "Hi" he calls out as he walks over to the early childhood teachers sitting at the table. He gives both of the teachers a kiss and a hug. C then walks over to the researcher who is standing by the video machine. "Come" he tells her as he takes her hand and leads her to the car. C gets in the car, and sits down in the drivers seat. He picks up the key, turns the car on, and starts driving the car making engine noises as he does so. The researcher sits down on a chair nearby. Another child walks over to the car. C tells the child to sit, and the child responds by attempting to get in the driver's seat. C tells the child "No", and pats the seat next to him with his hand. The other child

continues to get into the driver seat, as C holds onto the steering wheel and yells "Me". One of the graduate students comes over and tells C he has to share. C responds with "Me". The other child gets up and goes over to the climber, and C goes back to driving the car.

(27/2/83- 1:35)

C and another child are in the block corner. The other child goes over to the small truck and sits down on it. C follows her and gives her a push; the child pushes C back. C walks over to the rocker and begins to push it up and down. One of the graduate students walks over, picks C up and puts him in the rocker. The graduate student puts him on the floor of the rocker, C sits holding on the hand rails while moving the rocker back and forth with his feet. C turns and looks in the direction of a group of boys, who have just been attacked by a group of bad guys from outer space. C continues rocking as he watches the other children's play. He then crawls out of the rocker and goes over to where the play is occurring. He stands, and watches the play and then walks over to the car and gets in.

(11/3/83 - 1:58)

C walks out of the house corner with a purse over his right arm. He goes over to the car, gets in the driver's seat and puts his purse down beside him. C picks up the keys, turns on the engine, and drives away making car noises. Another child gets into the car beside C. C turns and says "Hi" and, then goes back to steering the car. Both children sit in the car as C drives. This action goes on for about two minutes. The other child then gets out of the car and walks away.

(18/3/83 - 2:17))

C is in the office using the typewriter. C, with his head bent over the machine, uses individual fingers to push down the keys on the typewriter. He stops typing, pushes down the automatic forward key, then goes back to typing. Again he stops typing. This time he takes the paper out of the carriage using the manual paper feed handle. Another child enters the office and tells C that he wants to use the typewriter. C pushes the child and starts hitting the keys of the typewriter. The other child responds by shoving C, and both children begin to push and shove each other. One of the graduate student comes over and removes C from the office. The other child starts to type on the typewriter.