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A STUDY OF SOCIAL GROUPINGS
OF PRESCHOOL CHILDREN
THESIS FOR THE DEGREE OF M. A.

Margaret Cawood

1930

THESIS

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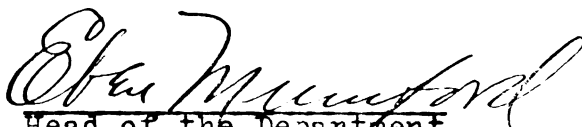
by

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Department of Sociology

Approved


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THESIS

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Margaret Cawood

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Chapter I

INTRODUCTION

The physical development of the child has been studied in all its various phases so that one may know what a normal physical development is. After years of examination, it is possible to determine what children of a certain age and height should weigh. This information is particularly valuable in relation to child welfare and health education. A little later in point of time but with the same earnestness and skillfulness the psychologists have sought to understand the mental and emotional development of the young child. They are discovering its normal mental and emotional reactions. Such information is also exceedingly valuable and useful though possibly not as objective as the physical standards.

The social development of the child is closely related to its physical and mental development. Until recently this field of child life has been unexplored and facts pertaining to it will remain unanswered until more studies have been made. A knowledge of the social development of the child can be gained by studying its behavior under ordinary circumstances. In the past, our information about normal social development has been obtained by studying the abnormal. For example, Mrs. H. W. Mallory, Psychiatrist State Hospital, University of Michigan, who has had several years experience with unadjusted and handicapped children, has collected some valuable information concerning the social development of such children.

Her studies and others of similar nature are showing the importance of knowing more about the needs of the child so he may not become unadjusted. The present tendency is toward a scientific study of the usual or normal modes of response.

The statement has often been made that the early years are the habit-forming years and that development occurs more rapidly in the preschool age⁽¹⁾ than at any other time.

William James says that plasticity varies inversely with age. "There is the common tendency for development to slow down as age proceeds. This tendency has been summarized by Minot for physical growth in the following words: 'The time required to accomplish a change of a given extent increases with the age of the organism. The older we are the longer it takes us to grow a definite proportionate amount.' Sanford affirms that the same law is true also of mental growth. Gesell remarks that there is an analogous concentration of mental growth in infancy. The older the child gets, the longer it takes to develop a proportionate amount."⁽²⁾ The above quotations seem to substantiate the statement that physical and mental growth progresses most rapidly at the preschool age. It seems logical to assume that social development follows this

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- (1) The term "preschool age" refers to the years of life before attendance at kindergarten or first grade.
(2) Hollingworth, H. L. - Mental Growth and Decline, pages 380 and 381.

general tendency also. Most of the studies concerning the rate of social development have been cross-sectional and certain stages of it have gained considerable attention, notably the "gang age" and the adolescent period. The whole span of social development has not been analyzed in a genetic way and further generalizations are not warranted until more studies have been made. If, as present evidence indicates, foundations for socialization are laid early in life, then the importance of the preschool period in relation to social development is obvious. Social contacts, particularly the contacts with equals, are a necessary part of normal social development. It is through group life that an individual learns to enjoy others and to share the fruits of companionship. "When a child reaches the age of two years, it is no longer enough for him to make a fine high pile of blocks; his satisfaction is incomplete until he has called his handwork to someone's attention and tasted the sweets of feeling his enthusiasm shared and his achievement commended by a sympathetic audience."⁽³⁾

Few people have studied the child in group life, whether under controlled conditions or during his leisure time activities. There is a paucity of data concerning the child's social development in relation to an effective adjustment to other personalities. Such adjustments are made very early in life. It may be too late even to wait until the child enrolls

(3) Fenton, Jessie C. - The Practical Psychology of Babyhood, page 314.

in the kindergarten to discover his shortcomings in this respect. Social habits formed before school age are probably the most influential factors in later development. A child may have to spend the rest of his life breaking down habits which originated in preschool days.⁽⁴⁾

One of the greatest opportunities for studying the child has developed within the last few years, - namely the pre-schools. Wherever they are established on a scientific basis, research programs have been started and new techniques for studying the behavior of children are being developed constantly. Only a few of the representative research centers can be mentioned here. Earlier studies, as has been indicated, placed the emphasis on the physical and mental development of the child. The Child Welfare Station at the University of Iowa is distinguished for research along this line. The individual growth curves and the records of Baldwin and Stecher have a permanent value.⁽⁵⁾ Later studies at this station contain a larger element of the social aspects, notably, Marston's study on "The Emotions of Young Children" and Ethel Verry's investigations of free play activities in terms of social behavior. Another important tendency in the analysis of social behavior has centered around the study of language. This approach had its impetus from the series of researches carried on at the Jean Jacques Rousseau Institute in Geneva, culminating in

(4) Sayles, Mary B. - The Problem Child in School, passim.
(5) Thomas, W. I. - The Child in America, page 496.

Piaget's work. Comprehensive researches of language are now in progress at the following centers: Merrill-Palmer School in Detroit, the Bureau of Educational Experiments of New York City, and the Institute in Minneapolis.⁽⁶⁾ Other experiments have been carried on for some time at the Institute of Child Welfare at Minneapolis under Anderson and Goodenough. They have two main projects under way, a controlled and an observational study. The controlled study is being made by Marjorie Walker. The observational study (by Mildred Parten) is on "The Role of Socialization and the Formation of Social Groups Among Pre-School Children" and has extended over two years. The observation was made during the free play hour. The procedure consisted in observing each child for one minute each day during this period, rotating the time.⁽⁷⁾ One conclusion of this study is embodied in the following statement, "The most significant fact which comes out of these observations is the fact that if we take a particular child and record his relationship to the group, we find that in 95% of the situations with which he is presented in the play situations, he is the dominating or leading individual, whereas another child under the same conditions is found to be in the dominating or leading position only 5% of the time."⁽⁸⁾ These one minute observations are being tested in the same school by observing each child during a long period and comparing the information of the two studies. New techniques

(6) Ibid. - report on pages 534 - 537.

(7) Ibid. - pages 519 - 521.

(8) Anderson, J. E. - The Genesis of Social Reactions in the Young Child, in the Unconscious; a Symposium, page 81.

for studying social behavior are being developed at Columbia University. The nursery schools connected with the Child Development Institute at Teachers College provides a very desirable laboratory. Miss Ruth M. Hubbard has developed a method of studying spontaneous group formations and a few preliminary results have been presented.⁽⁹⁾ In Russia, a study of spontaneous groupings of children of preschool age was made⁽¹⁰⁾ in 1927.

The observational part of the present study was made at the same time as those mentioned above, but entirely independent of them. References to the other studies will be made wherever the data can be compared with information derived in this investigation.

A. Purpose and Method.

The purpose of this study is twofold; namely, (1) to analyze certain factors in the social groupings of preschool children, and (2) to interpret the material thus secured in relation to the school and the home.

Observations of social groupings among preschool children were made in the nursery school of the Michigan State College during the school year from October 1927 to June 1928 which

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- (9) Thomas, Dorothy S. - Child Development Monographs No. 1. Some New Techniques for Studying Social Behavior, Chapter IV
(10) Janovskaja, Eugenie C. - Les Groupements Spontanes d'enfants a l'age pres'colaire. Archeves de Psychologie 20, February 1927, pages 219 - 233.

included three terms or thirty-three weeks. The writer was assisted in the observations by two Senior girls who had taken at least one course in Sociology and a course in Child Study. In the latter course, they were required to observe the pre-school children and to make a personality study of one child. In connection with this thesis each girl spent at least two hours a week observing and in return received six college credits. All of the children in the nursery school at the beginning of the study were observed the first term. Of these fourteen children, twelve remained in the school for the second term, and ten for the third term. Three new children were added the second term so that a total of fifteen children were observed. In the third term only those who had been observed either the first or the second term were considered, making a total of thirteen. In other words, ten children were observed for the full time, five for two terms and two for one term. Nine out of the seventeen children were boys ranging in age from two years ten months to four years nine months. The girl's ages ranged from one year ten months to four years three months. The median age of the period while the child was under observation was used in all cases where age was considered. Visits to the children's homes were made in the majority of cases and contacts were made with the other parents. A Few specific facts about each child follow:

Name of Child	:Median: : Age : :yr.-mo.:	Sex	:Ages of brothers and: :sisters in Oct. 1927:	Fathers' :Occupations
Jack	:4 - 9 :	boy	: None	:Sec. of M.S.C. : Alumni
Junior	:4 - 7 :	boy	: Bro. - 2; sis. - 1	:Doctor
Sylvia	:4 - 3 :	girl	: Sis. - 6; sis. - 8	:Mother-teacher at :M.S.C.
Ruth	:3 - 11:	girl	: Sis. - 9; bro. - 6; : sis. - 6 weeks	:Professor at : M.S.C.
Richard	:3 - 8 :	boy	: None	:Real estate
Norman	:3 - 8 :	boy	: None	:Civil Engineer
Betsy	:3 - 8 :	girl	: None	:Bank Cashier
Patricia	:3 - 5 :	girl	: None	:Salesman
Bob	:3 - 5 :	boy	: Bro. - 2 months	:Professor at : M.S.C.
Katherine	:3 - 3 :	girl	: Sis. - 10; bro. - 7	:Dean of M.S.C.
Hally	:3 - 1 :	girl	: None	:Auto Insurance
Philip	:3 - 0 :	boy	: Sis. - 10	:Bldg. & Supplies
John	:3 - 0 :	boy	: Bro. - 10; Bro. - 8	:Professor
Jim Sy.	:2 - 11:	boy	: Bro. - 4; sis. - 1	:Doctor
Jim Sh.	:2 - 10:	boy	: Bro. - 23; sis.-21; : bro. - 15; bro.-14	:Colonel at : M.S.C.
Valerie	:2 - 0 :	girl	: None	:Brick business
Margaret	:1 - 10:	girl	: Bro. - 15; sis.-12	:Lawyer (deceased)

The nursery school at the Michigan State College is located on the second floor of the Home Economics building. A kitchen, bathroom, and cloakroom adjoin the main room. The children are usually brought to the school by the parents; entering between 8:30 and 9:00 o'clock in the morning. The first thing they do is to remove their wraps. Each one is taught to be as independent as possible in this performance.

A separate locker is provided for each child which is marked by a particular picture. One may look for a ship and another for a bright red ball. The same markers are used on the wash cloths that hang in the bathroom. Before entering the play room each child visits the nurse who examines him for early symptoms of contagious diseases or bad colds. After these preliminary activities, the children spend about an hour and a half in the playroom where they are not directed. During this time they have an opportunity to play with those they have learned to enjoy most. Much of this time is spent playing with toys. The children find these toys behind bright colored curtains where they are kept when not in use. The toys are not kept on open shelves because they want to encourage a correct sense of values. At the beginning of this period, small glasses of water are placed on a low table and the children are encouraged to drink before playing. About ten o'clock they are each obliged to get a rug, also marked with the same picture as the washcloth and the locker. These rugs are placed in a circle in front of the piano by the children. Then follows a variety of activities, such as singing, story telling, dramatics, and conversation. While they are being thus directed orange juice in which is placed one spoonful of cod liver oil is being prepared. From the circle they pass or skip to the tables. Three children sit at a table with one adult. The adults are Home Economics students enrolled in the Child Study Course. One child from each table serves the others. After this, they all pass to the bathroom and then get ready to go outdoors. By this time it

is nearly eleven o'clock so another period of about three-quarters of an hour is available for free play before lunch. The play ground occupies a small piece of land which is enclosed on the sides adjoining the building. While the children are outside under the care of adults, tables are arranged for lunch and the cots set in place. When the meal is completed, each finds the cot bearing his or her mark. They are all required to sleep or lie quietly for an hour. At the close of this period the children put on their shoes and drink a glass of milk. Then it is time for the parents to take them home. The children usually depart between 3:30 and 4:00 o'clock. This is not a complete picture of one day in the nursery but it gives some idea of the amount of time that the children can spend in spontaneous groupings. Moreover it shows the number of different adult personalities with whom the children make daily contacts. The child study class with ten to fifteen members is required to spend certain periods in observation and in the performance of assigned work. Besides the students, specialists, workers and visitors are present at various times. A larger number of observations in this study were made while the children were indoors because that time was the most convenient for those making the records. If a child entered school after this play period, he could not be observed that day and was considered absent in that observational report even though he might have been present for the rest of the day.

(11)

A blank was devised for the use of each observer. The headings of the vertical columns in order were these, - date, number of minutes observed, minutes child was in free play, size of the group, minutes in the group, what they do, and names of the children in the group. One blank was used for each child. Each observer was assigned from four to six children. Absence of children changed the number observed from day to day. In the column headed "number of minutes observed" was recorded the time the observer entered the room and the time she left. In the column headed "minutes child was in free play" was recorded the time he was observed minus any time he **was** not able to be in free play. Hours for observation were chosen which offered the largest amount of time for free play. In the "size of group" column was given the number in each group formation. Under "minutes in the group" was placed the time interval, followed by the minutes in the group. An ordinary wrist watch was used and groupings under five minutes duration were not considered in this study. In the column headed "what they do" was placed the chief activities of the group members or the toys with which they played. Under "names of children" was placed the names of the children in the group with no regard as to what each was doing. An attempt was made to discover which child was the leader in each group but the task was considered too difficult in this study due to the fact that more than one child was being observed by each person.

(11) See appendix for schedule showing one day's observation of two different children.

For the purpose of this study a "social grouping" was defined as a group of two or more children playing together and showing interest in the same project. The following are examples of group activities:

1. Engaging in conversation
2. Looking at the same picture book
3. Playing with the same toy
4. Playing with different toys while working on the same project
5. Taking turns on the slide
6. Swinging another child

A child who participated in the following activities was not considered as a member of a group:

1. Watching a group
2. Assisting an adult or in a group sponsored by an adult
3. Playing in the same sandpile with different toys and showing no interaction
4. Sitting on the floor beside the group but not showing any outward cooperation or conflict with it

The term "preschool age" refers to the years of life before attendance at kindergarten or first grade. This period varies according to the school entrance age established by law in the different sections of the country. It ranges from five years to eight years. However, the preschools which have been established so far have adopted arbitrary standards about the age limits. These vary according to circumstances such as: facilities for proper care of the children and the purpose of the school. When the Michigan State College nursery school first started, children under five years of age were admitted, but

at the present time, with a long waiting list, preference is given to those between 18 months and four years. Special preference is given to the younger ones.

The words "free play" as used in this study mean the play time in which the children are free to choose their own activities.

Chapter II

TIME IN GROUPS

A. The Amount of time each child was observed.

The number of hours each child was observed depended largely upon two factors, first his enrollment in the nursery each term and second his presence in the school when the observations were being made. Table number one gives this information for each child by terms as well as the total for the three terms. Ten children were enrolled in the school all of the terms, five were enrolled two of the terms and two were enrolled but one of the terms. The children were observed on an average about the same number of hours each term ranging from 24.2 hours to 25.8 hours. However, there is a considerable difference when hours of individual observations are considered. In the first term, the hours ranged from 17.5 to 36.5; in the second term 9.0 to 44.0 and the third term 16.0 to 36.0. The total number of hours observed ranged from 17.5 hours to 116.5 hours with 61.5 hours as the average number of hours for all children. The child who was observed the largest number of hours was only absent twice when records were collected. Most of the absences were due to sickness. Hally who was absent 31 times and Katherine who was absent 17 times had the mumps. Bob who was absent 17 times had the chickenpox. The rest suffered with colds or sore throats. A few of the children came late, especially in the winter term, and thus diminished the number of records which could be procured from them.

Table Number I

The Number of Hours Each Child Was Observed

Names of the children	: Median Age : : yr.-mo. :	: Number of hours ob- : served by terms : : 1 : 2 : 3 :	: Total : : No. of : : hours : : observed :	: Ave. no. : : hours ob- : served : : each term :	: No. times ab- : sent when : : observations : : were made :
Jack	: 4 - 9 :	31.5: 14.5: 26.0	: 72.0:	24.0 :	10
Junior	: 4 - 7 :	24.0: 31.0: 31.0	: 86.0:	28.5 :	21
Sylvia	: 4 - 3 :	36.5: 44.0: 36.0	: 116.5:	38.8 :	2
Ruth	: 3 -11 :	23.5: 17.0: ----	: 40.5:	20.2 :	28
Richard	: 3 - 8 :	23.5: ----: ----	: 23.5:	23.5 :	7
Norman	: 3 - 8 :	28.5: 26.0: 16.0	: 70.5:	23.5 :	19
Betsy	: 3 - 8 :	18.5: ----: 31.0	: 49.5:	24.8 :	11
Patricia	: 3 - 5 :	----: 17.5: ----	: 17.5:	17.5 :	22
Bob	: 3 - 5 :	22.5: 33.3: 21.0	: 76.8:	25.6 :	17
Katherine	: 3 - 3 :	24.0: 31.5: 27.0	: 82.5:	27.5 :	17
Hally	: 3 - 1 :	22.6: 13.0: 10.0	: 45.6:	15.8 :	31
Philip	: 3 - 0 :	----: 34.5: 24.0	: 58.5:	29.3 :	9
John	: 3 - 0 :	----: 39.5: 28.0	: 67.5:	33.8 :	7
Jim Sy.	: 2 -11 :	26.5: 13.0: 26.0	: 65.5:	21.8 :	14
Jim Sh.	: 2 -10 :	21.0: 32.5: 28.0	: 81.5:	27.2 :	15
Valerie	: 2 - 0 :	18.5: 9.0: 16.0	: 43.5:	14.5 :	24
Margaret	: 1 -10 :	17.5: 30.5: ----	: 48.0:	24.0 :	16
Total	:	:338.6:386.8:320.0	:1045.4:	419.7 :	270
Average	: 3 - 5 :	24.2: 25.8: 24.6	: 61.5:	24.7 :	15.9

B. The percentage of time in "Free Play" and the number of times in the group.

It was impossible to find any hour in the nursery school program which represented equal free play time for all children. For instance, they were all required to drink a glass of water when it was served. It was brought into the playroom about nine o'clock and placed on a table. Until the children had formed the habit, considerable time was often spent in drinking the required amount. The younger children usually took a longer time than the others. If an adult took any part in the group formation it was not considered free play time and no records were taken. The older children spent more time with adults. The observational hours, as presented in Table number one represent the full time that the children were watched while Table number two shows what percentage of that time the children were free to form spontaneous groupings. As was stated before, 61.5 was the average number of hours which the children were observed. During 79.2 percent of this time they were not directed in any way. This represented an average of 48.7 hours that records were taken for each child. Richard and Patricia who were in the school one term spent an average of 15.2 hours in free play. Those who were in the school two terms averaged 58.5 hours. The percentage of the time observed spent in free play ranged from 63.2 to 90.8.

Table number two also shows that the number of times each child was in the group ranged from 14 to 285. The average number of times all the children were in the group was 99.2

and the total, 1687. The study⁽¹²⁾ made in Russia included 888 groupings. When the total number of hours in group formations was divided by the total number of times in the group the results show that there were 2.0 groups formed on an average every hour. The figures ranged from .5 to 3.1 groups per hour. There was a tendency for more groups to be formed per hour by the older children. In measuring social participation⁽¹³⁾ at the Institute for Child Welfare the results showed that on an average each of the eighteen children studied was in two groups every fifteen minutes or eight groups every hour. The present study included only groupings of five or more minutes duration, so it might be assumed that the average of six groups per hour more was made up of groups which lasted less than five minutes.

(12) Janovskaja, E. C. - op. cit.

(13) Thomas, D. S. - Some New Techniques for Studying Social Behavior. op. cit. page 81.

Table Number II

The Amount of Time In Free Play and the Number
of Times in the Group

Names of the children:	Total no. of hours in free play	of time ob- served in free play	No. of times in the group	Total hours in group	No. times in group per hr. of free play
Jack :	57.1	79.3	149	36.7	2.7
Junior :	60.9	70.8	145	42.8	2.4
Sylvia :	90.5	77.7	285	57.8	3.1
Ruth :	31.3	77.3	88	15.6	2.8
Richard :	17.0	72.3	22	3.6	1.3
Norman :	51.3	72.8	93	19.0	1.8
Betsy :	31.3	63.2	79	16.9	2.5
Patricia:	13.5	77.1	14	2.3	1.0
Bob :	66.5	86.6	134	27.4	2.0
Katherine	71.2	86.3	183	42.1	2.6
Hally :	35.5	77.9	37	6.0	1.0
Philip :	53.1	90.8	79	15.8	1.5
John :	56.4	83.6	102	19.1	1.8
Jim Sy. :	46.5	71.0	71	14.0	1.5
Jim Sh. :	70.2	86.1	157	32.1	2.2
Valerie :	35.2	80.9	18	3.6	.5
Margaret:	40.8	85.0	31	5.0	.8
Total :	828.3	79.2	1687		
Average :	48.7		99.2	21.2	2.0

C. The Percentage of Time in Groups

Before the child has reached the nursery school age, he has developed certain social reactions. "Sometime between eighteen months and three years, true social behavior develops and chains of response of both the linear and circular type described by Allport put in their appearance. The transition from what might be called the non-social stage to the social stage takes place very gradually, the rudimentary responses appearing within a few months after birth."⁽¹⁵⁾ What a child's reaction shall be at any given time is largely a question of what he has learned through practice.⁽¹⁶⁾ If the child has had little opportunity to play with another child he cannot be expected to desire his company. He would rather play with an adult because that is what he has practised. However, the nursery school presents a situation where the stimulations are so tremendous that every child becomes a part of a group of equals or nearly equals. It is surprising how quickly they become adjusted to the requirements of group life. When groups are mentioned in this paper, it is understood that they are the smaller spontaneous groupings within the larger nursery school group. How much time a child spends in these more intimate social situations is the theme of this section.

(14) Refers to free play time.

(15) Anderson, John E. - The Genesis of Social Reactions in the Young Child, in the Unconscious.

(16) Ibid., page 84.

Table number three gives the percentages of time spent in the group by terms. The first term the children spent on an average of 22.9% of their time in a group. The figure had increased to 44.5% the second term, and to 62.2% the third term. The percentage of time for three terms which all the children spent in the group was 43.5. Those who spent all three terms in the nursery were in groups on an average of 48 percent of their time. Similar results were found at the Institute of Child Welfare Research ⁽¹⁷⁾ where the children observed spent about 50 percent of their time in social situations. An increase in the time spent in the group from term to term was true for all children except Junior and Katherine. The considerable decrease that Katherine showed the third term might be explained by the fact that she had the mumps which caused her to be below normal physically. Although Junior made a slight decrease the third term, he had already attained close to the maximum percentage of time spent in the group the second term. The greatest amount of time spent in the group was reached by Sylvia the third term. She was the oldest girl in the nursery and has two sisters at home. One is two years older and the other four years older. They were her constant companions as well as neighbor children of her age. Moreover, Sylvia was only absent two days during this year in the nursery. Valerie spent the least amount of time in the group. She is an "only" child and never played with other children until she came to the nursery. Her attendance was very

(17) Thomas, D. S. - op. cit. page 81.

irregular and as a result her progress in socialization was slow. By way of comparison Margaret was the same age as Valerie when they entered but the former spent twice as much time in the group the first term and three times as much the second term. Margaret has a brother 15 years old and a sister twelve years and attended a little more regularly. The amount of time that Jim Sh. spent in the group the third term was a great increase over what he had spent the preceding terms. He has more brothers and sisters than any other child in the school. However, they are all considerably older than Jim so his problem in socialization on entering was: getting acquainted with his equals. Here again, the family pattern had an influence. Seemingly every child acquires a slant toward life due to his place in age among brothers and sisters or as an "only" child, and carries it with him to new social situations.

One would expect the older children to spend more time in groups than the younger children. This statement was found to be true. A correlation between the ages of the children and the percentage of time spent in the group was $+ .77 - .07$.
(18)
The Institute for Child Welfare Research reported that the child with higher chronological age and mental age seems to spend a larger percentage of time in social situations.

These results cannot be taken as absolute measures of the social behavior of all preschool children because the number of children observed is too small. However, the individual averages in this study were based on many records

(18) Ibid., page 83.

Table Number III

Percentage of Time in the Group

Names of the children	Median Age :yr.-mo.:	Percent of free play: time in the group			Total percent of time in the group
		1	2	3	
Jack	: 4 - 9 :	41.4:	77.0:	79.5 :	64.2
Junior	: 4 - 7 :	45.5:	80.2:	78.6 :	70.4
Sylvia	: 4 - 3 :	33.1:	69.5:	82.6 :	63.8
Ruth	: 3 - 11:	24.1:	80.4:	---- :	51.3
Richard	: 3 - 8 :	21.2:	----:	---- :	21.4
Norman	: 3 - 8 :	17.1:	50.2:	50.5 :	36.9
Betsy	: 3 - 8 :	27.7:	----;	72.9 :	54.0
Patricia	: 3 - 5 :	----:	17.0:	---- :	17.3
Bob	: 3 - 5 :	18.1:	40.8:	61.8 :	41.1
Katherine	: 3 - 3 :	37.6:	75.2:	54.5 :	59.3
Hally	: 3 - 1 :	10.9:	17.6:	31.9 :	17.0
Philip	: 3 - 0 :	----:	25.9:	35.9 :	29.8
John	: 3 - 0 :	----:	22.2:	55.2 :	41.1
Jim Sy.	: 2 - 11:	12.1:	27.4:	49.2 :	30.1
Jim Sh.	: 2 - 10:	10.0:	37.5:	81.4 :	45.8
Valerie	: 2 - 0 :	2.9:	4.5:	22.6 :	10.2
Margaret	: 1 - 10:	4.2:	15.6:	---- :	12.2
Average	:: 3 - 5 :	22.9:	44.5:	62.2 :	43.5

over a long period of time. It seems logical to conclude therefore that preschool children tend to spend more time in group life as association with other children increases and as they grow older. The fact that the children become better acquainted may have an influence in this connection.

Chapter III

SIZE OF GROUPS

A. The Average Size of the Group Formations

The reactions of the child to other individuals present one of the most important problems in his whole development. The factors which may be involved in any situation are so complex that little has been done toward the actual collecting of data. In searching for factors that could be studied in an objective manner, it was logical to assume that the size of the group formations might tell something about the child's socialization. It is significant to know how many children a child will choose to play with at one time. The average size of the group formations recorded in this study was $2.8 \pm .03$. This information for each child and how it varies from term to term appears in Table IV. The average for all children was $2.6 \pm .04$, the first term, $2.8 \pm .04$ the second and $3.0 \pm .05$ the third. This increase is significant as is indicated by the smallness of the standard error of these averages. When the figures for each child were examined, there were four, Hally, Philip, Jim Sh. and Margaret who did not show this regular increase. However, this may be accounted for by the fact that three of them had figures above the average the first term they were observed. The lowest average size of a group for any one term was 2.2 and the highest 3.5.

(19)

In the Institute for Child Welfare Research where
eighteen children between the ages of one year nine months

(19) Thomas, D. A. - op. cit. page 80.

to three years three months were observed the average size of the group was found to be 3.04. In the Bethlehem nursery where seventeen children between the ages of one year six months to four years two months were observed the average size of the group was 2.40. It is significant to note that there were approximately the same number of children considered in the present study as in these two studies. The difference in the average size of the group is probably due to the fact that only groups of five or more minutes duration were considered in the present study.

There is no evidence to show that age makes any appreciable difference in the size of the group. The correlation between age and this factor in the present study was $+ .31 \pm .15$. Although the ages of the children in the Bethlehem school had a wider range than those in the Institute nursery the size of the group did not vary to any great extent. (20)

The average size of the group was also correlated with the number of times a child participated in a group. The correlation thus secured was $+ .41 \pm .14$ which is of doubtful significance. When the same factors were considered at the Institute and Bethlehem nurseries there was no evidence of relationship shown. The Institute reported a correlation of $-.40 \pm .14$ and the Bethlehem $-.25 \pm .16$. (21)

The percentage of time spent in the group was also correlated with the size of group. The result in this calculation was $+ .43 \pm .19$. It is impossible to draw any con-

(20) Thomas, D. S. - op. cit. page 81

(21) Thomas, D. S. - op. cit. page 82-83.

Table Number IV

The Average Size of the Group

Names of the children	Median Age	Average Size of group by terms			Ave. size for all Terms
		1	2	3	
Jack	: 4 - 9	: 2.7	: 2.8	: 2.9	: 2.8
Junior	: 4 - 7	: 2.6	: 2.8	: 2.8	: 2.8
Sylvia	: 4 - 3	: 2.7	: 3.0	: 2.9	: 2.9
Ruth	: 3 - 11	: 2.4	: 2.9	: ---	: 2.8
Richard	: 3 - 8	: 2.5	: ----	: ---	: 2.5
Norman	: 3 - 8	: 2.7	: 2.9	: 3.5	: 3.0
Betsy	: 3 - 8	: 2.3	: ----	: 3.1	: 2.9
Patricia	: 3 - 5	: ---	: 2.8	: ---	: 2.8
Bob	: 3 - 5	: 2.7	: 2.9	: 3.3	: 3.0
Katherine	: 3 - 3	: 2.6	: 3.0	: 3.0	: 2.9
Hally	: 3 - 1	: 2.4	: 2.2	: 2.8	: 2.4
Philip	: 3 - 0	: ---	: 3.0	: 2.9	: 3.0
John	: 3 - 0	: ---	: 2.5	: 2.8	: 2.7
Jim Sy.	: 2 - 11	: 2.6	: 2.7	: 2.9	: 2.8
Jim Sh.	: 2 - 10	: 2.9	: 2.6	: 2.8	: 2.7
Valerie	: 2 - 0	: 2.3	: 2.8	: 2.7	: 2.6
Margaret	: 1 - 10	: 2.8	: 2.7	: ---	: 2.7
:		: 2.6 ± .04	: 2.8 ± .04	: 3.0 ± .05	: 2.8 ± .03

clusions from this figure. Moreover, with the same number of cases, the Bethlehem nursery reported a correlation of only $+ .49 \pm .13$. The Institute nursery with only one more case, showed a relationship at variance with the above figures. It reported a correlation of $+ .52 \pm .12$.⁽²²⁾ It appears that further study is necessary in order to make any definite statements in regard to this relationship.

The fact that the small child plays with one other child more often than a larger number does not mean that a single playmate will suffice. One of the great advantages of the neighborhood play group and the nursery school is the contacts which they afford with varying personalities. "The study of normal as well as abnormal psychology shows that the earlier a child makes its social contacts and feels itself an integral part of a community the easier does its adjustment come to the requirements of adult life."⁽²³⁾ However, it does not seem necessary to provide a half dozen companions at one time in order to meet the demands of the socialized preschool child. If he chooses either two or three more often than any other numbers, it would seem that three ought to furnish a basis for his social functioning. When the child is old enough to understand and develop a game he may demand more companions at one time. After all, one must recognize that there are types of experiences that are suitable to the level attained.

From the preceding data the following conclusions concerning the children in the Michigan State College Nursery

(22) Ibid.

(23) Baldwin and Stecher - Psychology of the Preschool child, page 253.

school may be drawn: first, the average size of the group was approximately 3.0; second, the size of the group increased from term to term. How much this increase is due to the fact that the children were better acquainted and how much is due to the increased time in socializing situations is not known. In all probability both factors are responsible. Third, age had little influence in determining the size of the group; fourth it is doubtful if the average size of the group for each child was influenced by either the average percentage of time in the group or the number of times each was in social situations.

B. The Frequency of the Different Sizes of Groups.

Further analysis of data presented in tables number V and VI show the frequency of different sized groups and the percentage each one is of the total number. The largest number of children in a spontaneous grouping which lasted five or more minutes was eight. As the size of the groups increased the frequency of their occurrence decreased. There were 828 groups which had two members representing about half of the total number. The figures show 500 groups with three members which was about 30% of all the group formations. There were less than one half as many groups with four members as there were with three. Only 7.4% of all the groups had five or more members. The nursery school of the Bureau of Educational Experiments, New York City, has definitely limited the size of the entire group to eight children. It is interesting to note that they have limited the number of children in the entire nursery school to a figure which was not exceeded by any of the 1687 spontaneous groupings in this study.

Table VI reveals more clearly the individual differences. The percentage of groups with two members ranged from 39.2 to 67.7. In all cases except one there was a larger percentage of groups of two than of any other one size. In this one instance 44.4% of the groups in which Valerie was present had two members and 50.0% had three members. There was no available data which would prove that this deviation was nothing more than a matter of chance. The gradual decrease in the percentages as the size of the group increased held true for each individual.

Judging from this data, it would seem that preschool groups of children lasting five or more minutes have reached the saturation point as far as numbers are concerned when eight members have been included. The figures also warrant the conclusion that as the size of a group increases the frequency of its occurrence decreases. The analyzed records show that a preschool child tends to spend half of his time in groups with one other person. Or, in other words, he is just as apt to be in a group with just one person as he is apt to be in all the other sized groups combined.

Table Number V

The Frequency of the Different Sizes of Groups

Names of Children	: Median Age	: The Size of Group	: 2	: 3	: 4	: 5	: 6	: 7	: 8	: Total
Jack	: 4 - 9	: 77	: 42	: 20	: 6	: 2	: 1	: 1	: 149	
Junior	: 4 - 7	: 77	: 40	: 17	: 7	: 3	: 0	: 1	: 145	
Sylvia	: 4 - 3	: 121	: 98	: 41	: 19	: 5	: 1	: 0	: 285	
Ruth	: 3 - 11	: 44	: 28	: 10	: 5	: 1	: 0	: 0	: 88	
Richard	: 3 - 8	: 12	: 8	: 2	: 0	: 0	: 0	: 0	: 22	
Norman	: 3 - 8	: 45	: 23	: 14	: 7	: 2	: 1	: 1	: 93	
Betsy	: 3 - 8	: 37	: 23	: 15	: 2	: 0	: 1	: 1	: 79	
Patricia	: 3 - 5	: 8	: 3	: 2	: 0	: 1	: 0	: 0	: 14	
Bob	: 3 - 5	: 61	: 33	: 27	: 9	: 2	: 1	: 1	: 134	
Katherine	: 3 - 3	: 82	: 55	: 28	: 14	: 3	: 1	: 0	: 183	
Hally	: 3 - 1	: 25	: 8	: 4	: 0	: 0	: 0	: 0	: 37	
Philip	: 3 - 0	: 31	: 28	: 15	: 3	: 1	: 1	: 0	: 79	
John	: 3 - 0	: 57	: 30	: 9	: 2	: 3	: 1	: 0	: 102	
Jim Sy.	: 2 - 11	: 40	: 17	: 8	: 3	: 3	: 0	: 0	: 71	
Jim Sh.	: 2 - 10	: 87	: 45	: 15	: 7	: 1	: 1	: 1	: 157	
Valerie	: 2 - 0	: 8	: 9	: 1	: 0	: 0	: 0	: 0	: 18	
Margaret	: 1 - 10	: 16	: 10	: 4	: 0	: 1	: 0	: 0	: 31	
Total	:	: 828	: 500	: 232	: 84	: 28	: 9	: 6	: 1687	

Table Number VI

Percentage of Group Formations which were represented in the Various Sizes

Names of children :	The Size of the Group :	2 :	3 :	4 :	5 :	6 :	7 :	8
Jack	: 51.7	: 28.2	: 13.4	: 4.0	: 1.3	: .7	: .7	
Junior	: 53.1	: 27.6	: 11.7	: 4.8	: 2.1	: .	: .7	
Sylvia	: 42.4	: 34.4	: 14.4	: 6.7	: 1.7	: .4	: .	
Ruth	: 50.0	: 31.8	: 11.4	: 5.7	: 1.1	: .	: .	
Richard	: 54.5	: 36.4	: 9.1	: .	: .	: .	: .	
Norman	: 48.4	: 24.7	: 15.0	: 7.5	: 2.2	: 1.1	: 1.1	
Betsy	: 46.8	: 29.1	: 19.0	: 2.5	: .	: 1.3	: 1.3	
Patricia	: 57.2	: 21.5	: 14.2	: .	: 7.1	: .	: .	
Bob	: 45.5	: 24.6	: 20.1	: 6.7	: 1.5	: .8	: .8	
Katherine	: 44.8	: 30.1	: 15.3	: 7.7	: 1.6	: .5	: .	
Hally	: 67.6	: 21.6	: 10.8	: .	: .	: .	: .	
Philip	: 39.2	: 35.4	: 19.0	: 3.8	: 1.3	: 1.3	: .	
John	: 55.9	: 29.4	: 8.8	: 2.0	: 2.9	: 1.0	: .	
Jim Sy.	: 56.3	: 24.0	: 11.3	: 4.2	: 4.2	: .	: .	
Jim Sh.	: 55.4	: 28.7	: 9.6	: 4.5	: .6	: .6	: .6	
Valerie	: 44.4	: 50.0	: 5.6	: .	: .	: .	: .	
Margaret	: 51.6	: 32.3	: 12.9	: .	: 3.2	: .	: .	
	: 49.1	: 29.8	: 13.7	: 4.9	: 1.7	: .5	: .3	

C. The Size of the Group in Relation to the Minutes in the Group.

In connection with the study of the size of the group, the question arises as to its relationship to the minutes spent in each group. This information is presented in table number seven. The number of minutes in each group extended from five minutes, which was the minimum recorded to sixty minutes. All the data was grouped according to five minute intervals except in the case of the 5 - 10 interval which had six minutes. The average size of the group for each of these interval periods varied from 2.0 to 3.0 but there is no consistent trend. The correlation of the size of the group and the number of minutes in the group was found to be $-.10 \pm .02$, and is therefore of doubtful significance. It seems that it is a matter of chance that groups of five or more members did not extend as long as groups of less than five. Evidently other factors besides size of the group have been influencing the number of minutes spent in each group. For instance interest in play material is probably one of the factors which causes the child to remain in one group longer than another. The five groups of eight members which existed 26 to 30 minutes were interested in placing chairs in a row and playing train. Children's interests as developed through play material will be presented in chapter six.

Table Number VII

The Size of the Group in Relation to the
Minutes in the Group

No. in: Group	5- ⁽²⁴⁾ 10	11- 15	16- 20	21- 25	26- 30	31- 35	36- 40	41- 45	46- 50	51- 55	56- 60	Total
2	468	125	103	39	33	18	12	19	5	2	4	828
3	319	91	35	25	14	4	7	1	4			500
4	147	39	25	9	6	2	3	1				232
5	61	15	6	2								84
6	26	1	1									28
7	3		6									9
8												6
Total	1024	271	177	75	58	24	22	21	9	2	4	1687
Average	2.9	2.8	2.8	2.7	3.0	2.3	2.6	2.1	2.4	2.0	2.0	2.8

(24) Interval one minute longer.

Chapter I V

MINUTES IN GROUPS

A. Average number of minutes in each group.

The growing realization that behavior is largely determined by the process of social interaction has turned our attention to a study of the time the child spends with his fellow playmates. From this viewpoint, it is important to study how long a child will remain in a group with his equals. The figures for the average number of minutes in each group are presented in Table eight. The children in this study remained in each group on an average of 11.8 minutes. In the study of spontaneous grouping of children of preschool age made in Russia, more groupings lasted ten minutes than any other period. ⁽²⁵⁾ Table number eight gives the average number of minutes in each group by terms. It was found that on an average the groups lasted 9.7 minutes the first term; 10.8 minutes the second; and 14.9 minutes the third. In other words, the children tended to remain longer in each group as the time in the nursery school increased. When the figures for the different individuals were examined, the deviations from the above trend were too small to be of significance, excepting the figures for Jack. The average length of time he spent in each group decreased the second term. Possibly the fact that he spent twice as much time in group situations during the second term as compared with the first may account for this deviation. Most of the children made a greater increase the third term. This may be

(25) Janovskaja, E. C. - op.cit.

due to three factors: first, the children were more settled in nursery school routine; second, they were better acquainted; third, they were a few months older.

The data in Table number eight show also a relationship between the ages of the children and the average number of minutes each spent in a group. This correlation was computed and it was found to be $+ .56 \pm .11$. When the individual cases are studied the records indicate that age was an important factor in determining the length of time spent in any one group. The highest average of 17.7 was made by Junior whose median age was four years seven months. The lowest average of 9.2 was made by Jim Sy. whose median age was two years eleven months. The averages for the different terms show an even greater variation. For instance, the lowest average in any one term was 6.3 for a child two years old while the highest average was 21.1 for a child four years seven months. There was also a positive relationship between the average length of time spent in the groups and the number of times in the group. This correlation was found to be $+ .55 \pm .11$. In other words, children who played in many groups tended to remain in each group longer.

From these data, it appears that the length of time a preschool child will stay in any one group varies according to age. As a rule, the older the child the longer he is apt to remain in each group. Age may not be the only influencing factor for it may be presumed that in a nursery school situation the child will remain in each group longer as he gets better acquainted. In an attempt to objectify studies of social

Table Number VIII

The Average Minutes in the Group

Names of: Median :		By terms			
children:	age :	1	2	3	Total
Jack	: 4 - 9 :	14.4	: 11.2 :	17.9	: 14.8
Junior	: 4 - 7 :	14.1	: 17.3 :	21.1	: 17.7
Sylvia	: 4 - 3 :	9.7	: 11.7 :	14.0	: 12.2
Ruth	: 3 - 11 :	10.2	: 10.8 :	----	: 10.6
Richard	: 3 - 8 :	9.9	: ---- :	----	: 9.9
Norman	: 3 - 8 :	9.3	: 13.4 :	13.1	: 12.3
Betsy	: 3 - 8 :	10.2	: ---- :	13.8	: 11.6
Patricia	: 3 - 5 :	----	: 10.0 :	----	: 10.0
Bob	: 3 - 5 :	10.2	: 10.8 :	15.4	: 12.3
Katherine	: 3 - 3 :	12.9	: 14.0 :	14.0	: 13.8
Hally	: 3 - 1 :	8.3	: 7.9 :	15.0	: 9.8
Philip	: 3 - 0 :	----	: 12.1 :	11.9	: 11.9
John	: 3 - 0 :	----	: 8.7 :	14.2	: 11.2
Jim Sy.	: 2 - 11 :	8.1	: 7.8 :	10.1	: 9.2
Jim Sh.	: 2 - 10 :	6.3	: 9.3 :	16.3	: 12.3
Valerie	: 2 - 0 :	6.3	: 6.5 :	16.5	: 12.0
Margaret	: 1 - 10 :	6.4	: 10.3 :	----	: 9.6
Average	: 3 - 5 :	9.7	: 10.8 :	14.9	: 11.8

groupings it would seem important to appreciate the possibility of more than one causal factor. For instance, the early home environment is a tremendous influence and should never be overlooked. Practically all of the child's time is spent in the home where the first lessons in socialization are laid. The data also furnished the information that the child who was a member of many groups tended to remain in each group longer than one who was a member of few groups. This means that the children who participated in many social situations were not the ones who flitted from one group to another. They were apparently more socialized and enjoyed spending a longer time with their playmates.

Chapter V

Composition of the Groups

A. Composition by Sexes.

The children in the Michigan State College nursery are usually about evenly divided between the sexes. When a boy leaves the school, the directors prefer that the next child entering be a boy. In the present study there were nine boys and eight girls. The children were fairly evenly divided in the age groups also. It seems then that each child had about the same chance to play with one of the opposite sex. Table number nine shows the composition of the groups by sexes. Out of the 1,687 total groupings 900 or 53.3% were bisexual. The boys were in social situations a total of 952 times. Only 48.5% of their groups were bisexual as compared to 59.6% of the girls' groupings. In other words, the boys preferred playing in a group with their own sex more often than the girls did. This was also true in the study made in Russia, where 61.68% of the groups in which the boys played were unisexual while only 43.16% of the groups in which the girls played were of the same sex. The same study showed 67.37% of the total 888 groupings as unisexual while the present study revealed only 46.7% which were unisexual. When the individual figures are examined, there appears to be but one extreme case, that of Richard. Of the groups to which he belonged 86.4% were unisexual. There were three cases whose group relations were about 33% unisexual and three whose group relations were at least 62% unisexual. The other figures approximated the

(26) Janovskaja, E. C. - op.cit.

average. Exactly one half of the groups Valerie was in were bisexual.

These data show that both boys and girls tend to spend considerable time in groups with the opposite sex. Five out of eight girls were in social situations where boys were present more than half of the times. On an average, the boys spent their time in groups almost equally between the unisexual and the bisexual.

Table Number IX

The Composition of the Groups by Sexes

Names of: children:	Total no.: of times :in groups:	No. of times: groups were bisexual	Percent :bisexual	No. of times: groups were unisexual	Percent :uni- sexual
Jack	: 149	: 79	: 53.0	: 70	: 47.0
Junior	: 145	: 52	: 35.9	: 93	: 64.1
Sylvia	: 285	: 190	: 66.7	: 95	: 33.3
Ruth	: 88	: 50	: 56.8	: 38	: 43.2
Richard	: 22	: 3	: 13.6	: 19	: 86.4
Norman	: 93	: 54	: 58.1	: 39	: 41.9
Betsy	: 79	: 41	: 51.9	: 38	: 48.1
Patricia:	14	: 6	: 42.9	: 8	: 57.1
Bob	: 134	: 91	: 67.9	: 43	: 32.1
Katherine	183	: 106	: 57.9	: 77	: 42.1
Hally	: 37	: 18	: 48.6	: 19	: 51.4
Philip	: 79	: 53	: 67.1	: 26	: 32.9
John	: 102	: 38	: 37.3	: 64	: 62.7
Jim Sy.	: 71	: 23	: 32.4	: 48	: 67.6
Jim Sh.	: 157	: 69	: 43.9	: 88	: 56.1
Valerie	: 18	: 9	: 50.0	: 9	: 50.0
Margaret:	31	: 18	: 58.1	: 13	: 41.9
Total	: 1687	: 900	: 53.3	: 787	: 46.7
Boys	: 952	: 462	: 48.5	: 490	: 51.5
Girls	: 735	: 438	: 59.6	: 297	: 40.4

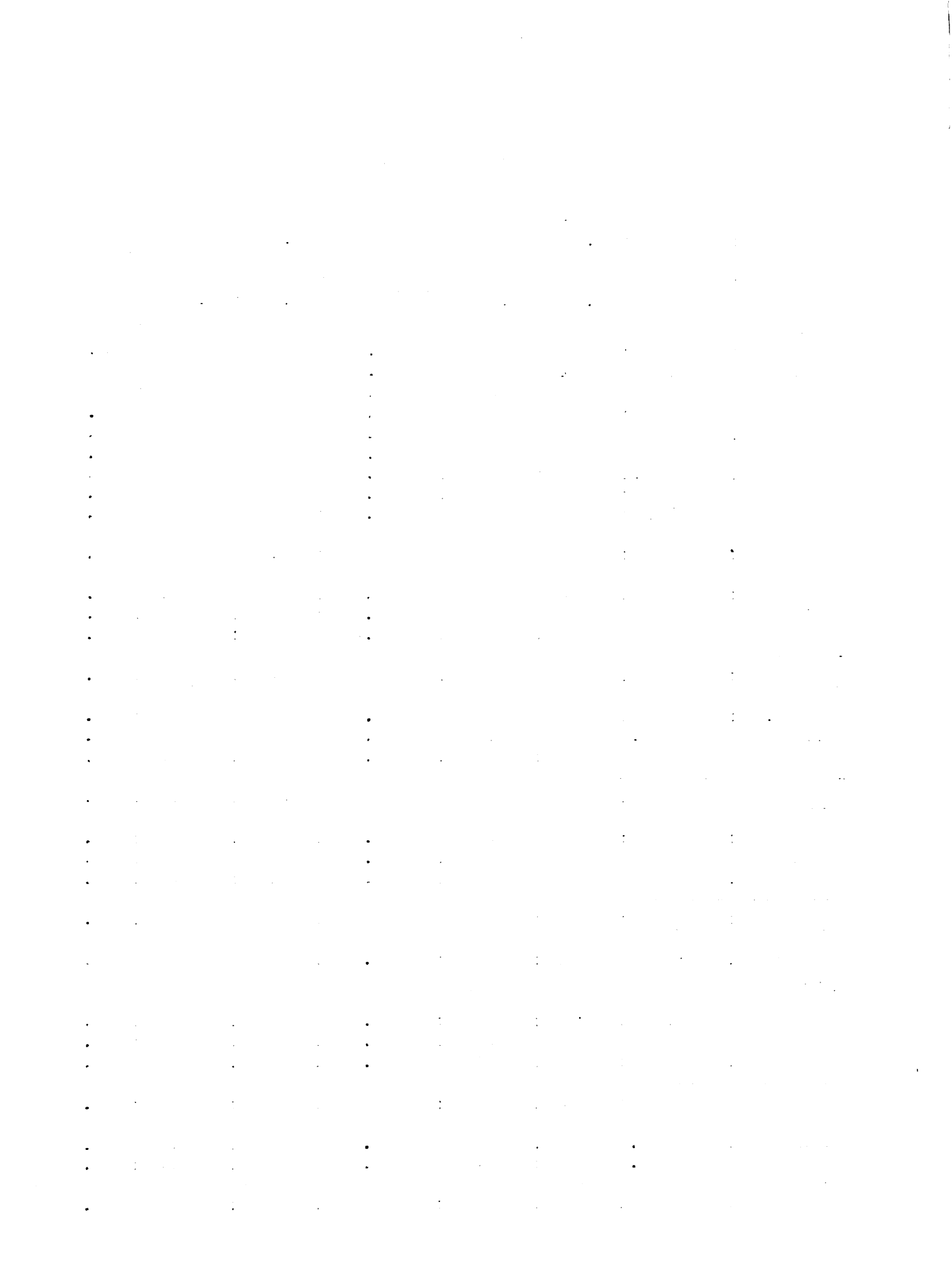
B. Group Combinations.

The number of group combinations in this study were almost countless. An attempt was made to tabulate the ones that seemed most significant. Those group combinations in which one child was found with any other child twelve times or more were considered. The resulting list was still too long for certain purposes so group combinations which occurred twenty-five times or more were considered separately. It could be assumed with safety that it has become a habit when children are found in the same group at least twenty-five times. The material will be presented in two forms. Those which occurred at least twenty-five times will be shown in table ten. This table gives the total number of times, the total number of minutes, and the percentage of group time which each child spent in the same group with another child. The same information is given for each child when in the group with just one other child. There were nine children with whom Sylvia played at least twenty-five times. She was in a group with Jack 73 times and with Ruth and Katherine 61 and 60 times respectively. These figures represented the total number of times these particular children were in groups with Sylvia. When she played with just one other child, Betsy had first place. Sylvia played with her twenty-three times representing 9.2% of Sylvia's total time spent in the group. Altogether she spent about $1/3$ of her time playing with any "one" of the nine children.

There were five instances where a child played with three other children in the same group twenty-five times.

Table Number X
Group Combinations

Name of child and total minutes in group	Children: with whom each played	No. of times each played in the same group with the children listed	No. of times each played with just one other child	% of group time	% of group time	% of group time
		No. of times	No. of minutes	% of group time	No. of times	% of group time
Sylvia 3467	: Jack	: 73	: 836	: 24.1	: 18	: 205 : 5.9
	: Ruth	: 61	: 727	: 21.0	: 11	: 146 : 4.2
	: Katherine	: 60	: 736	: 21.2	: 7	: 110 : 3.2
	: Bob	: 46	: 566	: 16.3	: 7	: 73 : .2
	: Betsy	: 45	: 592	: 17.1	: 23	: 320 : 9.2
	: Norman	: 43	: 539	: 15.5	: 10	: 130 : 3.7
	: Jim Sy.	: 36	: 361	: 10.4	: 5	: 36 : 1.0
	: Jim Sh.	: 28	: 388	: 11.2	: 7	: 100 : 2.9
	: Junior	: 25	: 211	: 6.1	: 1	: 10 : .03
Total	:	:	417	:	:	89 : 1130 : 30.33
Katherine 2528	: Ruth	: 93	: 1376	: 54.4	: 40	: 699 : 27.7
	: Sylvia	: 54	: 656	: 25.9	: 3	: 50 : 2.0
	: Bob	: 33	: 443	: 17.5	: 10	: 192 : 7.6
Total	:	:	180	:	:	53 : 941 : 37.3
Jim Sh. 1928	: John	: 47	: 554	: 28.7	: 25	: 319 : 16.5
	: Jim Sy.	: 38	: 491	: 25.5	: 21	: 286 : 14.8
	: Sylvia	: 28	: 428	: 22.3	: 5	: 85 : 4.4
Total	:	:	113	:	:	51 : 690 : 35.7
Jack 2199	: Junior	: 71	: 1052	: 47.8	: 47	: 946 : 43.0
	: Sylvia	: 43	: 576	: 26.2	: 12	: 235 : 10.7
	: Ruth	: 29	: 266	: 12.1	: 9	: 137 : 6.2
Total	:	:	143	:	:	68 : 1318 : 59.9
Junior 2570	: Jack	: 116	: 2214	: 86.1	: 65	: 1524 : 59.3
Bob 1643	: Sylvia	: 40	: 485	: 29.5	: 6	: 52 : 3.2
	: Katherine	: 30	: 456	: 27.8	: 9	: 182 : 11.1
	: Jack	: 25	: 293	: 17.8	: 1	: 10 : .6
Total	:	:	95	:	:	16 : 244 : 14.9
John 1146	: Jim Sh.	: 50	: 669	: 58.4	: 28	: 369 : 32.2
	: Jim Sy.	: 25	: 225	: 19.6	: 12	: 95 : 8.3
Total	:	:	75	:	:	40 : 464 : 40.5



Norman 1141	:	Sylvia	:	35	:	431	:	37.8	:	11	:	133	:	11.7
Ruth 933	:	Katherine	:	51	:	586	:	62.8	:	26	:	361	:	38.7
	:	Sylvia	:	26	:	218	:	23.4	:	2	:	10	:	1.1
	:	Jack	:	26	:	245	:	26.3	:	7	:	109	:	11.7
Total	:		:	103	:		:		:	35	:	480	:	51.5
Betsy 1014	:	Sylvia	:	46	:	582	:	57.4	:	19	:	280	:	27.6
	:		:		:		:		:		:		:	
Jim Sy. 842	:	Jim Sh.	:	29	:	391	:	46.4	:	18	:	281	:	33.4

Katherine was in a group with Ruth 93 times and out of that number they were alone forty times. Katherine played 54 times with Sylvia but was with her only three times when no one else was present. She also played with Bob a great deal. Jim Sh. spent a large part of his time with John, Jim Sy. and Sylvia. Jack also chose three people but he devoted most of his time to just one of them for he spent 43.0% of his time with just Junior. Junior reciprocated by spending 59.3% of his time with Jack. Bob spent more of his time with Sylvia, Katherine and Jack. John was invariably in a group with Jim Sh. or Jim Sy. Norman was only in a group with one child twenty-five times and that was Sylvia. Ruth spent more than 1/3 of her time with Katherine and about 1/2 with just three children. The times they spent alone with certain children are perhaps the most significant facts. Three of the children, Patricia, Valerie and Margaret were not in a group twenty-five times with any other child.

In order to give a picture of the other outstanding group combinations the percentages representing those which occurred twelve times or more were placed in table number eleven. The total percentages at the right of the table do not equal one hundred because there was an overlapping in the members of the groups. For instance, Jack spent 47.8% of his group time in social situations where Junior was present but Ruth might have been there part of the time too. Another glance at table number ten shows that Jack spent 43.0% of his time with just Junior. Therefore the 4.7% more time he was with Junior, other children were present too. Each child's presence in a group with a particular child was the result of direct observation of the former. For instance, when Richard was being observed he was in a group with Junior thirteen times but it does not show in the form for Junior because when he (Junior) was being observed he was not in a group with Richard twelve times.

Placing the figures as they are in table number eleven, gives one a picture of the socialization of each child. Two of the seventeen children, Valerie and Patricia were not in a group twelve times with any other child. They are both only children. Sylvia was in groups at least twelve times with twelve different children. Katherine and Bob were next highest with nine and eight respectively. In such a small group it would be expected that those who played with many children played with each other. Such was the case for there were only two more children, Jim Sh. and Norman, who played with more than six other children to any extent. There are six instances

Table Number XI

Percentage of Group Time Spent with Each Child.

Names of: Children:	Jack	Jun-ior	Syl-via	Ruth	man	sy	Bob	erine	Hally	ip	John	Sy	Sh	Jim	Mar-	Total
	47.8	26.2	12.1	12.1	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	94.9(1)
Junior	86.1	11.2	9.6	8.3	:	:	:	:	:	:	:	9.3	:	:	:	124.5
Sylvia	24.1	6.1	21.0	15.5	17.1	16.3	21.2	8.1	5.1	:	10.4	11.2	3.7	159.8	:	:
Ruth	26.3	23.4	:	:	15.6	62.8	:	:	:	:	:	:	:	:	:	128.1
Richard	:	58.7	:	:	:	:	:	:	:	:	:	:	:	:	:	58.7
Norman	22.9	18.8	37.8	:	20.2	17.8	:	:	:	:	:	16.2	:	133.7	:	:
Betsy	19.4	57.4	:	:	:	25.1	:	:	:	:	:	:	:	101.9	:	:
Patricia	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Bob	17.8	29.5	15.3	17.0	:	27.8	:	15.0	:	9.1	17.5	:	149.0	:	:	:
Katherine	9.2	25.9	54.4	7.4	8.1	17.5	:	8.3	:	5.5	9.1	:	145.4	:	:	:
Hally	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Philip	12.1	16.9	:	:	:	22.0	:	:	:	15.8	11.0	:	77.8	:	:	:
John	:	17.0	:	:	:	:	:	:	:	19.6	58.4	:	95.0	:	:	:
Jim. Sy.	:	14.3	17.9	:	:	:	:	:	:	:	46.4	:	78.6	:	:	:
Jim. Sh.	8.3	22.3	:	:	15.0	:	7.5	10.4	28.7	25.5	:	:	117.7	:	:	:
Valerie	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
Margaret	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

(1) Percentages do not equal one hundred due to the overlapping in the members of the groups which is explained in part B.

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of children who spent more than half their time in groups with one particular child being present. These combinations are listed below:

Junior	spent	86.1	of his	time	in	groups	with	Jack	present
Ruth	"	62.8	"	her	"	"	"	Katherine	"
Richard	"	58.7	"	his	"	"	"	Junior	"
Katherine	"	54.4	"	her	"	"	"	Ruth	"
Betsy	"	57.4	"	her	"	"	"	Sylvia	"
John	"	58.4	"	his	"	"	"	Jim Sh.	"

One significant fact the above list shows is that in every case a boy was always present in a group with a boy or a girl was always in a situation with a girl.

On the whole, the figures reveal extreme variations in the number of children that the different ones have chosen as constant companions. In this study, the boys who had formed outstanding combinations chose to be in groups with boys. The girls chose girl companions. In nearly every case where two children spent a great deal of time together they were of about the same age.

C. The Composition by Ages.

It would be interesting to know on what basis the children have made their choices in selecting companions. From the study (27) of spontaneous group formations which was conducted at the Child Development Institute of Teachers' College, Columbia University, Miss Ruth M. Hubbard has presented the following information. "The correlation between each child's chronological age and the average chronological age of the three children with whom he played the most was $+ .09$; the correlation between each child's mental age (Kuhlman test) and the average mental age of the three children with whom he played the most was $+ .41$." In the same study she correlated the above factors concerning each child and the averages of the three children with whom each played the longest. The relationship between the chronological ages was $-.22$ and between the mental ages was $+.62$. From the above correlations Miss Hubbard contends that children who play together in the largest number of situations are not those of similar chronological ages but those of similar mental ages. Since the probable error of the correlation $+ .41$ is $\pm .13$, (considering 18 cases were used), the conclusion she reached must rest on the last correlation of $+.62$ with a probable error of $\pm .10$ (again, considering 18 cases were used.) However, she shows in the same study that the correlation between the chronological and mental ages of these children was $+.78 \pm .07$.

(27) Thomas, D. S. - op.cit. pages 83-84.

It was impossible in this study to make any correlations using mental ages because mental tests were not given to the children. Nevertheless, it is possible to make correlations between each child's chronological age and the average age of the three children with whom each played the largest number of times. It was found to be $+.41 \pm .14$. Due to the high probable error this figure is of doubtful significance. There is also some doubt as to whether an average of three may be truly representative. Because of this fact, a correlation was computed between each child's age and the age of the one child with whom he played the largest number of times. This figure was $+.62 \pm .10$.

Judging from this data, it seems logical to conclude that the children in the Michigan State College nursery school tended to play with children of about the same chronological age. At least, wherever two children spent a great deal of time together they were about the same age. If it could be shown that there was a high correlation between the chronological and the mental ages of the children as was shown in Miss Hubbard's study, then it could be said that the children who play together in the largest number of situations are those of similar mental ages.

Chapter VI

PLAY MATERIALS AND ACTIVITIES FOUND IN THE GROUPS

A. Number of times play materials were used.

The social development of the child is a gradual process. The ease with which a particular child develops poise in his relationships is largely determined by his previous experiences. It is a wise parent or teacher who knows what experiences are of most value. A normal child will attempt to experiment with whatever material lies at hand. Harriet Johnson of the Bureau of Educational Experiments of New York City has said, "The introduction to a social life must be safeguarded just as is the introduction to the physical environment. In having the group together we are offering the children a chance for experience in social contacts. As we assure them safety in their physical experiences so we try to introduce them to social contacts gradually and protect them at least for a time." (28) In the nursery school in connection with the Bureau Miss Johnson has carried out this idea from the very start. When admitting new children, she allows only one to enter at a time so that each child will enter a somewhat integrated group. Another way in which she has protected the children is to consistently turn them toward play material. Quoting from her paper again, she says, "It is not necessary to devise methods of teaching children to use materials unless their natural

(28) Johnson, Harriet - The Educational Implications of the Nursery School. Reprint from Progressive Education - Jan. Feb. Mar. 1925.

impulses have been seriously thwarted. If we find children consistently failing to turn any part of the environment to their play uses it is the choice of materials and the method of presentation which must be challenged. But above all we must define what we mean by profitable use of play materials. We must ask ourselves by what standard we judge children's products. Year by year, as we observed our children in the Bureau school, we have tried to keep interrogations rather than theories in the forefront of our attention. We are more and more impressed with the value which lies in a child's orderly progression through activities and concerns, - social, emotional and physical - which are appropriate to his age level. We feel that it would be dogmatic to list these age level performances categorically. They show qualitative rather than quantitative distinctions. Furthermore, our judgment regarding a child's product, whether it be expressed through his muscles, through his social relationships, through his emotional reactions or through his language must be based on the satisfaction which accrues to him. (29)

Because of a recognition of the great value of play materials in the development of the child, an attempt was made in the present study to list all the materials that were used in each group. This information may be found in table number twelve. The column at the right gives the total number of times certain materials were used. Blocks were used more than

(29) Ibid.

any other play material, totaling 518 times. Perhaps blocks stand at the head of the list because they challenge the creative ability of the child. The educational value of a toy is largely determined by what the child is able to do with it. The child soon finds out that two can build a bigger barn than one in the same length of time. He also discovers that he gets more real joy when his enthusiasm is shared. The Michigan State College Nursery school is equipped with the plain wooden assorted blocks and the small colored cubes. It is significant to note that blocks have been made larger and lighter because they are more easily adapted to the larger muscles of young children. So it is not surprising that the assorted blocks were used most frequently by the children in this study. Other materials for which the large muscles are needed such as the teeter, slide, and sand were used a great deal more than any other equipment in the outdoor play. They would have been used more times than the pegboard or the shears if the outdoor observations had been equal to the indoor. The pegboard, shears and beads are toys which demand hand and eye coordination. They represented the second most popular group of play materials. The children were allowed to take small cars out doors but they were not used in a group any more times than sand. The rest of the play materials are listed in table number twelve according to the number of times they were used.

Table number twelve also reveals a difference in the number of times the materials were used by the boys and the girls. For instance, blocks were used by the boys 348 times

Table Number XII

Number of Times Play Materials Were Used

Play Materials:	Blocks:	board:	Peg:	Paper&: Shears:	Teeter: Slide:	Sand:	Small: Cars:	Beads:	Truck:	set:	Kar :	Tea:	Kiddy: Weights:	Dolls:	Chairs:
Jack	85	0	8	10	5	3	14	2	7	2	2	2	1	1	1
Junior	69	1	7	7	8	15	10	3	1	3	5	0	0	3	3
Sylvia	77	15	14	24	19	6	4	14	1	10	5	5	7	3	3
Ruth	26	8	12	7	2	5	4	1	1	2	1	0	7	1	1
Richard	7	0	0	0	1	6	4	0	3	1	0	0	0	0	0
Norman	21	2	9	11	6	10	2	1	4	1	3	1	0	3	3
Betsy	21	5	3	0	5	0	1	4	0	7	0	1	2	3	3
Patricia	2	2	2	0	1	0	0	3	0	0	0	0	0	0	0
Bob	43	11	7	6	6	3	2	1	12	0	2	4	2	5	5
Katherine	30	18	20	6	3	9	4	5	4	5	1	5	16	5	5
Hally	11	3	4	0	0	1	0	3	1	1	0	2	0	0	0
Philip	28	9	6	0	2	0	0	7	4	0	0	6	1	0	0
John	16	14	5	6	5	1	0	0	1	4	9	3	0	5	5
Jim Sy.	36	3	4	11	1	1	8	3	3	1	5	3	0	0	0
Jim Sh.	43	13	6	16	9	1	8	4	7	4	9	5	2	3	3
Valerie	2	3	0	1	5	0	1	0	0	2	0	3	1	0	0
Margaret	1	10	2	0	1	1	0	1	0	1	2	0	1	0	0
Boys	348	53	52	67	43	40	48	21	42	14	36	24	6	20	20
Girls	170	64	57	38	36	22	14	31	7	30	8	16	34	12	12
Total	518	117	109	105	79	62	62	52	49	44	44	40	40	32	32

Table Number XII - Continued.

Play	:Jungle:	Picture:	Tele-:Monte.:
Materials: Gym	:Clay:Swing:Ball: Book	:Paints:Wagon:phone: Set.	:Miscellaneous (1)
Jack	: 1 : 1 : 0 : 5 :	: 1 : 2 : 1 : 0 :	: 4 : (1) Easter things
Junior	: 4 : 2 : 3 : 7 :	: 2 : 1 : 4 : 0 :	: 8 : Football
Sylvia	: 5 : 8 : 7 : 2 :	: 2 : 4 : 1 : 2 :	: 6 : Tool box
Ruth	: 0 : 2 : 1 : 0 :	: 3 : 2 : 2 : 0 :	: 8 : Tractor
Richard	: 0 : 1 : 0 : 0 :	: 0 : 0 : 1 : 0 :	: 4 : Wheelbarrel
Norman	: 1 : 0 : 1 : 1 :	: 0 : 0 : 3 : 1 :	: 6 : Snow
Betsy	: 2 : 1 : 0 : 0 :	: 0 : 1 : 0 : 1 :	: 5 : Colored sticks
Patricia	: 0 : 0 : 0 : 1 :	: 0 : 2 : 0 : 0 :	: 0 : and cubes
Bob	: 2 : 1 : 0 : 2 :	: 1 : 1 : 0 : 0 :	: 5 : Boards
Katherine	: 3 : 6 : 0 : 0 :	: 0 : 2 : 4 : 0 :	: 4 : Balloon
Hally	: 0 : 2 : 0 : 0 :	: 2 : 3 : 0 : 0 :	: 1 : Cylinders
Philip	: 3 : 0 : 3 : 0 :	: 0 : 0 : 0 : 4 :	: 0 : Cupboard
John	: 2 : 0 : 2 : 2 :	: 1 : 0 : 0 : 1 :	: 3 : Doll buggy
Jim Sy.	: 0 : 0 : 1 : 0 :	: 1 : 0 : 0 : 0 :	: 2 : and bed
Jim Sh.	: 2 : 0 : 2 : 0 :	: 6 : 0 : 0 : 0 :	: 2 :
Valerie	: 0 : 0 : 0 : 0 :	: 1 : 0 : 0 : 0 :	: 0 :
Margaret	: 1 : 1 : 0 : 0 :	: 0 : 0 : 0 : 0 :	: 0 :
Boys	: 15 : 5 : 9 : 17 :	: 11 : 4 : 9 : 8 :	: 7 : 35
Girls	: 11 : 20 : 11 : 3 :	: 9 : 14 : 8 : 7 :	: 3 : 23
Total	: 26 : 25 : 20 : 20 :	: 20 : 18 : 17 : 15 :	: 10 : 58

and by the girls only 170. The three oldest children used the blocks more times than all the rest of the children put together and two of them were boys. The two youngest were girls and seldom used the blocks when in a group. Therefore, the difference in the use of blocks by the boys and the girls was probably due to the age of the sexes in this school.

There was a considerable difference in the number of times the small cars and the truck were used by the boys and the girls. In fact, boys used them more than four times as often as girls. On the other hand, the girls used the tea set twice as many times as the boys and the dolls five times as often. The boys in a group played with a ball five times as often as the girls while the girls used the clay four times to the boys once. Paints were also used more often by the girls. Play materials which were used less than ten times by all the children were listed in the table under miscellaneous. It should be kept in mind that these articles were also used many times by the children individually and that they do not represent all the toys found in the nursery. Records were made only of materials used in the group situations. All the play materials in the Michigan State College nursery have been purchased with the idea of giving the children an opportunity to express themselves in a variety of ways. The observations in this study were started when the school had been established only three months. Other materials of interest to children have been added from time to time.

B. Percentage of time that certain play materials were used.

The child who plays with certain toys over and over again does so because of the great joy he derives from them. In part A of this chapter, certain play materials were pointed out as being popular with most of the children. At least, they were used more times in the social situations. The question then arises as to whether those toys that were used many times were used for long periods. In other words, did the repeated use of particular materials develop into habits? It was possible in this study to compute the percentage of the time spent in groups that each child played with blocks, pegboard, slide and etc. The information is presented in table number thirteen. On examination one immediately notices that blocks are again at the head of the list for they were used longer than any other toys representing 31.1% of the time. Only toys that were used at least 2% of the time were placed in this table but it is significant to note that they are the same toys that were at the head of the list in table number twelve. Also the differences in the percentages of the boys and girls show the same tendencies as table number twelve. However, this table brings out the fact that twelve toys were used 68.8% of the children's time in groups. Each child used them more than half of the time. The lowest percentage of time they were used was 2.1 and the highest 89.1.

One can justly assume that children continually use certain toys because they wish to prolong the pleasures which result.

Table Number XIII

The Percentage of Time That Certain Play Materials Were Used in the Groups

Names of : Materials:	Blocks:	board:	Peg-&:Shears:	Tee-ter :	Slide:ghts :	beads :	tea :	set :	sand:	truck:	colls:	cars :	small:	Total
Jack	: 52.1 :	: .0 :	: 2.3 :	: 4.4 :	: 2.2 :	: 1.4 :	: .7 :	: 1.5 :	: .8 :	: 4.6 :	: .1 :	: 4.5 :		74.6
Junior	: 47.0 :	: .2 :	: 4.3 :	: 3.2 :	: 3.9 :	: .0 :	: 1.2 :	: 2.5 :	: 5.1 :	: .4 :	: .0 :	: 5.2 :		73.0
Sylvia	: 30.0 :	: 5.7 :	: 4.8 :	: 6.1 :	: 4.2 :	: 2.5 :	: 5.6 :	: 4.0 :	: 1.4 :	: .1 :	: 1.3 :	: 1.0 :		66.7
Ruth	: 24.0 :	: 8.1 :	: 13.5 :	: 6.8 :	: 1.1 :	: .0 :	: 1.3 :	: 2.1 :	: 3.8 :	: .3 :	: 9.6 :	: 1.7 :		72.3
Richard	: 27.5 :	: .0 :	: .0 :	: .0 :	: 6.0 :	: .0 :	: .0 :	: 2.3 :	: 11.5 :	: 6.9 :	: .0 :	: 12.4 :		66.6
Norman	: 25.2 :	: 1.3 :	: 9.3 :	: 11.0 :	: 5.8 :	: 1.8 :	: 2.2 :	: .4 :	: 7.4 :	: 2.4 :	: .0 :	: .6 :		67.4
Betsy	: 23.9 :	: 7.4 :	: 2.9 :	: .0 :	: 3.5 :	: 1.5 :	: 5.4 :	: 6.8 :	: .0 :	: .0 :	: .7 :	: .5 :		65.0
Bob	: 28.4 :	: 11.6 :	: 6.0 :	: 2.5 :	: 2.9 :	: 4.9 :	: 1.4 :	: .0 :	: 2.1 :	: 7.1 :	: 2.7 :	: .5 :		70.1
Katherine	: 17.0 :	: 10.5 :	: 11.7 :	: 2.2 :	: 1.6 :	: 3.5 :	: 2.1 :	: 2.3 :	: 4.5 :	: 1.0 :	: 8.1 :	: .9 :		65.4
Hally	: 24.9 :	: 2.8 :	: 19.3 :	: .0 :	: .0 :	: 8.3 :	: 8.3 :	: 1.4 :	: .8 :	: .6 :	: .0 :	: .0 :		66.4
Philip	: 34.5 :	: 14.5 :	: 7.0 :	: .0 :	: 1.1 :	: 10.6 :	: 4.8 :	: .0 :	: .0 :	: 7.1 :	: .5 :	: .0 :		80.1
John	: 20.2 :	: 12.7 :	: 5.7 :	: 2.6 :	: 2.2 :	: 2.2 :	: 3.5 :	: .0 :	: 1.3 :	: .4 :	: .0 :	: .0 :		52.1
Jim Sy.	: 45.1 :	: 6.5 :	: 6.4 :	: 10.7 :	: 1.8 :	: 4.5 :	: 3.0 :	: 3.6 :	: .4 :	: 3.7 :	: .0 :	: 3.4 :		89.1
Jim Sh.	: 28.6 :	: 8.6 :	: 2.5 :	: 6.5 :	: 3.9 :	: 3.6 :	: 2.3 :	: 2.9 :	: .3 :	: 4.4 :	: 1.6 :	: 2.5 :		67.7
Valerie	: 13.9 :	: 20.8 :	: .0 :	: 2.3 :	: 2.3 :	: 27.8 :	: .0 :	: 13.9 :	: .0 :	: .0 :	: 1.4 :	: .9 :		83.3
Margaret	: 1.7 :	: 38.5 :	: 3.3 :	: .0 :	: 14.4 :	: .0 :	: 3.3 :	: 1.7 :	: 5.0 :	: .0 :	: 3.3 :	: .0 :		71.2
Boys	: 36.9 :	: 5.6 :	: 4.7 :	: 4.7 :	: 3.2 :	: 3.0 :	: 1.6 :	: 1.8 :	: 2.5 :	: 3.6 :	: .6 :	: 2.8 :		71.0
Girls	: 22.8 :	: 9.0 :	: 8.1 :	: 3.7 :	: 3.2 :	: 3.1 :	: 4.2 :	: 3.4 :	: 2.4 :	: .4 :	: 4.0 :	: .9 :		65.2
Total	: 31.1 :	: 7.0 :	: 6.1 :	: 4.3 :	: 3.2 :	: 3.0 :	: 2.7 :	: 2.6 :	: 2.5 :	: 2.3 :	: 2.0 :	: 2.0 :		68.8

The characteristic called "flitting" or the short span interest in materials was not characteristic of these children while in groups. More than half of their time was spent with twelve different toys and nearly one third with one toy. This seems more significant when one stops to consider the number of children using the materials.

C. Number of Times Certain Activities were a part of the Social Situations.

Just as it is unnecessary to devise methods of teaching children to use play materials, it is unnecessary to force their social contacts. Even the youngest children shout for glee at the sight of their kind. As soon as the child learns to talk his interest in others increases considerably. The story of Helen Keller's life reveals the great importance of the use of language. After she had learned the meaning of one word, water, her progress in learning and social behavior was greatly accelerated. It is said that after she learned the significance of word-signs, she wanted to teach the letters to everyone she met. Harriet Johnson states that the acquiring of actual language marks a stage in social growth and awareness. (30) In her opinion this fact is beyond dispute. One of the outstanding features of early speech patterns of children is the fact that questions are asked for the sake of social contact. (31) Conversation, no doubt, played a prominent part in all the groups. There were other activities which did not involve toys or where objects played a minor part. The number of times these activities were found in the groups was arranged in table number fourteen. The activities listed appear 300 times. Playing house usually involved some particular space in the nursery and was the cause of sixty-one groups. Conversation only, ranked second or fifty times.

(30) Johnson, Harriet - Children in the Nursery School.
page 102.

(31) Ibid., page 118.

The girls used conversation only 37 times and the boys 13 times. This was the only activity which used two per cent of the children's time. There were several physical activities such as running, skipping, wrestling, turning somersaults and walking which might have been included under one head. It was surprising how much time children spent in groups watching and talking about the different pets that were brought to the room from time to time. Most of the children were fascinated by the rats. John was found in a group watching them almost as many times as the entire number of girls were found doing the same thing. From the data given thus far concerning play materials versus activities in relation to group formations the following statements might be made: Groups of preschool children are held together through interest in play materials more often than they are by mere social activities. In fact, the five toys which were used the most were found in groups three times that of all social activities. People who have had a chance to study children in home life know how they are often lost without a favorite toy. Grandmothers who are wise keep a box of toys handy so that group activities run more smoothly.

Table Number XIV

Number of Times Certain Activities Were a Part of the Social Situations

Activities:Playing:Conversa-:Run-:Watching:Playing:Walk-: :Watching:											
: House :tion only:ning: Rats : tag : ing:Games: bird :Miscellaneous (1)											
Jack	: 4 :	4 :	4 :	4 :	5 :	: 0 :	: 3 :	1 :	2 :	: 2 :	(1) Looking
Junior	: 4 :	2 :	5 :	2 :	2 :	: 0 :	: 0 :	: 0 :	: 0 :	: 1 :	out of the
Sylvia	: 16 :	14 :	11 :	6 :	6 :	: 3 :	: 2 :	4 :	1 :	: 10 :	window
Ruth	: 0 :	3 :	1 :	0 :	0 :	: 3 :	: 2 :	: 0 :	1 :	: 1 :	Sitting at
Richard	: 2 :	0 :	0 :	0 :	0 :	: 0 :	: 0 :	: 0 :	: 0 :	: 0 :	a table
Norman	: 1 :	0 :	3 :	0 :	0 :	: 3 :	: 0 :	: 0 :	: 0 :	: 2 :	Joining
Betsy	: 9 :	6 :	3 :	3 :	3 :	: 0 :	: 3 :	: 0 :	: 0 :	: 3 :	hands in
Patricia	: 0 :	0 :	0 :	0 :	0 :	: 0 :	: 1 :	: 0 :	: 0 :	: 0 :	a circle
Bob	: 6 :	4 :	3 :	3 :	1 :	: 2 :	: 1 :	: 2 :	1 :	: 2 :	Singing
Katherine	: 7 :	14 :	5 :	1 :	1 :	: 2 :	: 6 :	: 2 :	: 2 :	: 0 :	Skipping
Hally	: 1 :	1 :	0 :	1 :	1 :	: 2 :	: 0 :	: 1 :	: 0 :	: 3 :	Wrestling
Philip	: 1 :	1 :	1 :	0 :	0 :	: 1 :	: 0 :	: 2 :	1 :	: 0 :	Watching
John	: 4 :	1 :	4 :	11 :	11 :	: 1 :	: 2 :	: 0 :	3 :	: 2 :	the fish
Jim Sy.	: 0 :	0 :	2 :	0 :	0 :	: 0 :	: 0 :	: 1 :	: 0 :	: 1 :	Turning
Jim Sh.	: 5 :	1 :	4 :	9 :	9 :	: 2 :	: 0 :	: 2 :	1 :	: 4 :	somersaults
Valerie	: 0 :	0 :	0 :	1 :	1 :	: 0 :	: 0 :	: 0 :	: 0 :	: 0 :	
Margaret	: 1 :	0 :	0 :	0 :	0 :	: 4 :	: 0 :	: 0 :	: 0 :	: 1 :	
Boys	: 27 :	13 :	26 :	28 :	28 :	: 9 :	: 6 :	: 8 :	8 :	: 19 :	
Girls	: 34 :	37 :	20 :	12 :	12 :	: 14 :	: 14 :	: 7 :	4 :	: 14 :	
Total	: 61 :	50 :	46 :	40 :	40 :	: 23 :	: 20 :	: 15 :	12 :	: 33 :	

D. Play Materials and Activities in Relation to the Socialization of the Child.

As was stated before, the value of any toy or activity is largely determined by the satisfaction which the child obtains from its use. It is hard to measure the satisfactions children receive when they share their toys but one may be sure they are on a higher level. One little girl had been in the school less than a week when she got out the orange and black painted tea set. She was an only child and had not learned the joy of sharing, consequently she placed a cup and saucer for herself and sat on the rest of them. She did not seem satisfied with the arrangement and the other children wanted a drink too so the next time she got out the set she called other children to take part. Another girl, also an only child, called everything "mine". Her mother said she even called the boats on the lakes "mine". She seemed to enjoy the baby buggy more than any other toy and at first would not share any part of it. When a child put his or her hand on the buggy she would push it off, place her hand on the same spot and say, "mine". One morning when she came to school someone else had the buggy and she was lost for a few minutes. Then she noticed the baby's bed would also move and she was happy. So every morning she entered the room her head was held high surveying the room for the next best toy not in use. Needless to say she had learned a great lesson. The slide was one of the play materials which demanded a great deal of courage, especially for the younger children. A two year old child got in line, went to the top and started down. In some way she lost her balance and fell off when she was half

way down but instead of crying she turned to the children and said, "I flied".

The preschool period is a time when the child's fancy soars high. He becomes imaginative. Painting is an activity which lends itself to this sort of behavior. At the best their paintings are crude, most of them being mere smears of color to an adult. A boy produced what appeared to be splotches of color, nothing else, but he was proud of it for it represented rain to him. The teacher placed his name in one corner and it was pinned on the wall as an exhibit. Many more paintings followed and each child knew what he had painted.

At this age, the children are beginning to be interested in picture books. In this study they were used in twenty groups. Quite often there was an older child showing the book to a younger child. Pictures are considered the beginning of the reading period so it is an important step in his literary experience. Expression developed through music, stories, dramatics, and rhythm was carried on in the directed group at the Michigan State College nursery so such activities were not included in this study.

Just the physical contact alone has some value in socialization. There was an unusual case of a three year old boy who was in the college nursery for five weeks. When he first entered school he did not want any child to touch him. He had an unhappy experience with a neighbor boy which prejudiced

him against all strange children. It was difficult for him to overcome this feeling so it was a great triumph for him when at the end of five weeks, as he was lying on a mat near another child, he reached out and touched him.

From the above instances it would seem that the child in the preschool is given the opportunity for self expression through the various media at hand but most of all he is learning to value himself as an intrinsic part of the group as well as an individual.

Chapter VII

SUMMARY STATEMENTS

From the data which has been presented in the preceding chapters, the following statements can be made concerning the seventeen preschool children at the Michigan State College nursery who were studied during the time between October 1927 and June 1928.

1. The children spent, on an average, 44% of their time in groups.
2. They averaged two groups per hour of free play.
3. More time was spent in group formations as the period of association with other children in the nursery school increased.
4. The children with higher chronological ages spent a larger percentage of time in social situations. The correlation between the ages of the children and the percentage of time spent in the group was $+ .77 \pm .07$.
5. The average size of the groups in which the children participated was approximately 3.0.
6. The size of the group increased from term to term.
7. Age had little influence in determining the size of the group. The correlation between these two factors was $+ .31 \pm .15$.
8. The average size of the group was not influenced by either the average percentage of time in the group or the number of times each child was in social situations. The correlations were $+ .43 \pm .19$ and $+ .41 \pm .14$ respectively.
9. Groups lasting five or more minutes reached the saturation point as far as numbers were concerned when eight members had been included.
10. As the size of the groups increased their frequency of occurrence decreased.
11. Each child spent half of his time in groups with but one other person.
12. There was no evidence to show that the size of a group influenced its duration in period of time.

13. The length of time a child stayed in any one group varied according to age. As a rule, the older the child, the longer he was apt to remain in each group. The correlation between these two factors was $+.56 \pm .11$.
14. The child who was a member of many groups tended to remain in each one longer.
15. Of the 1,687 groups, 53.3% were bisexual.
16. The boys spent their time about equally between the unisexual and the bisexual while 60% of the girls' groups were bisexual.
17. There were extreme variations in the number of children that the different ones chose as constant companions.
18. Boys chose to spend a great deal of time with certain boys and likewise outstanding combinations included only girls.
19. In nearly every case where two children spent a great deal of time together they were about the same age.
20. Out of all the play materials the assorted blocks were used the most frequently.
21. The next three most popular indoor play materials were the pegboard, shears and beads, all of which demanded considerable eye and hand coordination.
22. There was considerable difference in the number of times the boys and the girls used certain toys. For instance, the girls played with dolls, tea set, paints and modeling clay many more times than the boys. On the other hand, the boys were fonder of the small cars, the ball, the truck and the Kiddy Kar.
23. Slightly more than two thirds of the children's time was spent with twelve different toys and nearly one third with one toy. Therefore a long span interest in certain play materials was characteristic of these children while in groups.
24. The groups were held together through interest in play materials more often than they were by mere social activities.
25. Conversation was the only social activity outside of play materials which used as much as two percent of the children's time.
26. The children in this school were given an opportunity for self expression in a variety of ways.
27. The socialization of each child was a gradual process, growing out of contact and interaction.

BIBLIOGRAPHY

Books

- Baldwin, B. T. and Stecher, L. I. - The Psychology of the Preschool Child.
D. Appleton and Co., 1925.
- Bertram, I. W. - The Little Child in Our Great Cities.
American Child Health Association, 1925.
- Blanton, Smiley and Margaret - Child Guidance.
The Century Company, 1927, Chapter XII.
- Cameron, H. C. - The Nervous Child.
Oxford University Press, 1928, (reprint).
- Cleveland, Elizabeth - Training the Toddler.
J. B. Lippincott, and Co., 1925.
- DeLima, Agnes - Our Enemy, The Child.
New Republic Inc. 1926, Chapter V.
- Drummer, Mrs. W. F. - (Editor) - The Unconscious: A Symposium.
Alfred A. Knopf, 1927.
- Foster, Josephine C. and Anderson, John C. - The Young Child and His Parents.
Minneapolis: Institute of Child Welfare, University of Minnesota, 1927.
- Gesell, Arnold - The Mental Growth of the Preschool Child.
MacMillan, 1925.
- Gesell, Arnold - The Preschool Child.
Houghton Mifflin Co., 1923.
- Groves, E. R. and Gladys - Wholesome Childhood.
Houghton Mifflin, 1924.
- Groves, E. R. - Personality and Social Adjustment.
Longmans, Green and Company, 1925.
- Hollingworth, H. L. - Mental Growth and Decline.
D. Appleton and Co., 1928.
- Jenton, Jessie C. - Practical Psychology of Babyhood.
Houghton Mifflin Company, 1925.
- Johnson, Harriet - Children in the Nursery School.
John Day, 1928.
- Lee, Joseph - Play in Education.
MacMillan, 1915.

- Mateer, Florence - The Unstable Child.
D. Appleton and Company, 1927.
- O'Shea, Michael V. - The Child - His Nature and His Needs.
Valpariso, Indiana: Children's Foundation 1924.
- O'Shea, Michael V. - Our Children.
American Library Association, 1925.
- Patri, Angelo - Child Training.
D. Appleton and Company, 1922.
- Patri, Angelo - Problems of Childhood.
D. Appleton and Company, 1926.
- Richardson, F. H. - Parenthood and the Newer Psychology.
G. P. Putnam's Sons. 1926.
- Sayles, Mary B. - The Problem Child at Home.
The Commonwealth Fund, Div. of Pub. 1928.
- Sayles, Mary B. - The Problem Child in School.
Joint Com. on Methods of Preventing Delinquency.
Pub. No. 4, 1926.
- Sies, Alice, C. - Spontaneous and Supervised Play in Childhood.
MacMillan, 1922.
- Thomas, Dorothy Swain - Some New Techniques for Studying
Social Behavior.
Bureau of Publications Teachers' College, Columbia
University, 1929.
- Thomas, Wm. I and D. S. - The Child in America.
Alfred A. Knopf, 1928.
- Wile, Ira. S. - The Challenge of Childhood.
T. Seltzer, 1926.
- Concerning Parents.
A symposium of present day parenthood. New Republic Inc.
1926.

Bulletins and Pamphlets.

Andrus, Ruth - Tentative Inventory of Habits of Children,
Two to Four Years.

(Thesis Ph.D. 1924, Teachers' College, Columbia
University, New York)

Campbell, C. Macfie, M. D. - Psychology of Pre School
Period.

American Child Hygiene Association, Baltimore, Maryland.

Hughes, E. and Roberts, L. - Children of Pre School Age
in Gary, Indiana.

Children's Bureau, U. S. Department of Labor, Washington, D.C.

Johnson, Harriet - A Nursery School Experiment.

New York Bureau of Education Experiments. 1922.

Rand, Winifred - The Nursery School - Learning through
Living.

(Reprint of article written for the Public Health Nurse,
June 1927.) Merrill-Palmer School, Detroit, Michigan.

Root, Wm. T. - Pre First Grade Training.

Kindergarten Circular No. 13, Bureau of Education,
Department of the Interior, Washington, D. C. (Reprint
from School Life, June, 1923)

Thom, D. A. - Child Management.

Publication 143, Children's Bureau, U. S. Department
of Labor, Washington, D. C.

Thom, D. A. - Habit Clinics for the Child of Pre School Age.

Publication No. 130, Children's Bureau, U. S. Department
of Labor, Washington, D. C. 1924.

Vandewalker, Nina C. - Some Experiments in Pre School
Education.

Kindergarten Circular No. 10, 1923, Bureau of Education,
Department of the Interior, Washington, D. C. (Reprint
from School Life, November 1922.)

Vincent, E. Leona - Paul; a study of an average child's
development under intelligent guidance.

May, 1927. (Revised and reprinted from Child Culture,
February-March 1927, Vol. II, Number 2 - 3, pages 11-12,
40-41.) Merrill-Palmer School, Detroit, Michigan.

Woolley, Helen T. - David - A study of the experience of
a nursery school in training a child adopted from an
institution.

Child Welfare League of American Case Studies, No. 2,
April 1925.

Woolley, Helen T. - The Validity of Standards of Mental Measurement in Young Childhood.

Presented before Section Q of the American Psychological Association, Washington, D. C., December 31, 1924.

(Reprint from School and Society, Vol. XXI, No. 538, April 18, 1925) Merrill-Palmer School, Detroit, Michigan.

Mudgett, Mildred Dennett - European Schools for Pre School Children.

American Association of University Women, Education Office, Washington, D. C.

Articles in Periodicals.

- Baruch, Dorothy W. - A Cooperative Nursery School.
Journal of American Association of University Women,
Vol. 20, No. 3, April 1927.
- Brubaker, Miriam - The Child in His Play Group.
National Education Association, 1928, pages 429-32.
- Burkhard, R. - Preschool Guidance.
Education, November 1925.
- Christiansen, Helen M. - The Nursery School Child and His Needs.
National Education Association, pages 462-5, 1927.
- Cleveland, E. - Twixt Infancy and Alphabet.
Survey, January 1923.
- Eaton, E. O. - Descriptive Sketch of Chicago University Cooperative Nursery School.
Journal Home Economics, November 1924.
- Farley, Belle - Merrill Palmer Nursery School.
Child Welfare Magazine, November 1922.
- Gesell, A. - Nursery School Movement.
School and Society, 20:644-52, November 22, 1924.
- Gesell, A. - The Nursery School Movement and Home Economics.
Journal of Home Economics, January 1925.
- Gesell, A. - Nursery School.
Delineator, December 1925.
- Greenwood, Barbara - The Three Year Olds.
Childhood Education, December 1924, 168-175.
- Gruenberg, Mrs. S. M. - Thinking of the Child as a Whole.
Child Welfare Magazine, September 1922.
- Henton, Emma - The Nursery School Movement in England and America.
Childhood Education, May 1925.
- Howes, E. P. - Nursery School.
Woman's Home Companion. December 1923.
- Janovskaja, Eugenie C. - Les Groupements spontanés d'enfants à l'âge préscolaire.
Archives de Psychologie XX, February 1927, 219-33.

Lyford, G. L. - Preschools in 1925.
Education 46: October 1925.

- How Young Should a Pupil Be?
Survey, March 1925.

More, E. R. - Needs of Nursery Period.
National Education Association 1923.

Pearson, Ruth R. - The Behavior of the Preschool Child.
American Journal of Sociology 31: 800, 1926.

Sweeney, M. E. and others. - Method for Studying the
Activity of preschool children.
Journal Home Economics 21:1929, 671-8.

Thurston, E. L. - Your Shy Boy.
Child Welfare Magazine September 1927.

Van Watters, M. - Nineteen Ways of Being a Parent.
Survey Vol. 57:433.

White, E. N. - Merrill Palmer School.
Journal Home Economics, November 1921.

Woodworth, R. S. - The Nursery School and Child Development.
School and Society 29: April 1929.

Woolley, Helen T. - Merrill Palmer School of Homemaking.
School and Society, April 1924.

Woolley, Helen T. - Personality Studies of Three Year Olds.
Journal of Experimental Psychology, December 1922.

Woolley, Helen T. - Agnes, A Dominant Personality in the
Making.
Ped. Sem. and Jour. of Genetic Psych. 324: 1925.

- Preschool Education.
A reprint from Progressive Education for January, February
and March, 1925. Ten articles describing the nature of the
preschool child, the characteristics of nursery school
education, and opportunities for parental education.

Foster, Josephine, C. - Character Training in Preschool Child.
National Education Association 1929, 385-89.

APPENDIX

A Day's Observation of Two Children

Names of: children:	Number of minutes observed:	Times in play:	Size of group:	Time in each group:	Inter-vals:	Minutes with, or activity:	What they played:	Children in each group:
Ruth	60	1	2	9:00-9:13	13	blocks		Ruth and Jack
: 14 :	:	:	:	:	:	:	:	:
:	:	2	4	9:13-9:18	5	watching bird		Ruth, Jack and
:	:	:	:	:	:	:	:	: Sylvia, Norman
:	:	:	:	:	:	:	:	:
:	:	3	2	9:25-9:32	7	painting		Ruth and Jack
:	:	:	:	:	:	:	:	:
:	:	4	2	9:33-9:42	9	paper cutting		Ruth, Jack a
:	:	:	:	:	:	:	:	:
:	:	5	3	9:42-9:58	16	paper cutting		Ruth, Jack
:	:	:	:	:	:	:	:	: and Junior
Jack	60	1	2	8:55-9:16	21	blocks		Jack and Junior
: 19 :	:	2	4	9:16-9:21	5	teetering		Jack, Junior,
:	:	:	:	:	:	:	:	: Jim Sy. & Sylvia
:	:	3	2	9:21-9:40	19	ball		Jack and Junior

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