

A TECHNIQUE FOR ASSESSING COMPLEXITY OF
DRAMATIC PLAY OF NURSERY SCHOOL CHILDREN

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ABSTRACT

A TECHNIQUE FOR ASSESSING COMPLEXITY OF DRAMATIC PLAY OF NURSERY SCHOOL CHILDREN

by LuAnne Thompson

It is widely recognized by educators, psychologists, and increasing numbers of parents, that children give adults many clues to their attitudes, feelings, and understandings, through their dramatic play. Authorities suggest that a normative standard would make it easier to evaluate the dramatic play of an individual child. The primary purpose of this study was to develop a modified time sampling technique for studying preschool children's dramatic play. Further refinement and subsequent use of this technique might obtain information which could be used to establish a normative standard of complexity of dramatic play of preschool children.

Dramatic play was defined as all instances in which the child through overt behavior dramatized or enacted personal experiences from real life situations or fantasy interpretations of real life situations. In this study, five components of complexity--theme, activities, time of enactment, role, and other children involved--were observed and analyzed. Seven subjects, three girls and four boys, in the three and four year old nursery school groups at Campus

School, State University of New York, College of Education at Buffalo, were selected. They represented a two-and-one-half year age span from three years to five and one-half years. The subjects were observed at approximately monthly intervals during a six month period, for a total of 450 minutes, during fifty-one observations. Observations of dramatic play were made in the nursery school during the free-play period. A modified time sampling technique was used to secure data.

The technique developed in this study was productive in collecting information which described various degrees of complexity of dramatic play, in all but one of the stated components of complexity, namely, variety of activities.

The choice of theme varied with the age level, housekeeping being the theme most often engaged in by the youngest children and occupational and vicarious themes most often by the older children. However, it is likely that a sex factor also entered in, since no girls were included in the two older age levels. When boys and girls were compared, the proportion of housekeeping themes decreased and occupational and vicarious themes increased with age of boys; whereas, for girls, the proportion of housekeeping themes increased and occupational and vicarious themes decreased with age. Choice of theme in this study appeared to have been affected by the maturity of the child with the accompanying development of identifica-

tion with like-sexed adults and their activities and with the widening environment of home and community including mass communication media of television, books, and movies.

Activities were observed and recorded in order to better determine the extent to which the theme was developed. Housekeeping activities were then grouped into categories. However, the observer found it difficult to identify and categorize occupational and vicarious experience activities because of a child's unrealistic concepts in these areas. There was no apparent trend in the number of activities per observation. Greater variety of housekeeping activities occurred at the lower age levels while greater variety of vicarious activities occurred at the older age levels. The occupational theme was not well developed in terms of activities at any age level.

The time required for the enactment of an individual theme tended to increase with the maturity of the child. Percentage of total time spent in enactment of the housekeeping theme decreased as children matured, while percentage of total time spent in enactment of the occupational and vicarious themes increased as the child grew older.

The child's roles and personifications were closely related to the theme of play. There was an increased incidence of a subject's verbally naming his role in the play with increased maturity of the child, possibly indicating a developing awareness of the role which he was playing, as well as increased language development.

The number of children involved in the enactment of a theme tended to increase with the maturity of the child.

The developing trends of complexity of dramatic play as indicated in this study warrant further investigation.

A TECHNIQUE FOR ASSESSING COMPLEXITY OF DRAMATIC PLAY OF
NURSERY SCHOOL CHILDREN

By

LuAnne Thompson

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TABLE OF CONTENTS

	Page
LIST OF TABLES	v
 Chapter	
I. INTRODUCTION	1
Purpose of Study	
Definition of Dramatic Play	
Plan of Study	
II. REVIEW OF LITERATURE	7
Imagination	
Dramatic Play	
Choice of Play Materials and Activities	
Attention Span	
Children Involved	
III. PROCEDURE	30
Selection and Validity of Criteria	
Method of Observation	
Method of Analysis	
IV. COLLECTION AND ANALYSIS OF DATA	37
Time and Place of Study	
Selection of Subjects	
Period of Observation	
Categories of Themes and Roles	
V. FINDINGS	45
Description of the Level of Complexity of Dramatic Play of Each Subject	
Sally 36-42 months	
Jim 37-43 months	
Sandy 41-46 months	
Sally 47-50 months	
Jim 48-50 months	
Mary 50-53 months	

Sandy 51 months
 Bruce 51-54 months
 Jon 54-59 months
 Paul 60-64 months

Development of Trends of Complexity,
 in Terms of Criteria, Over Two and
 One-half Year Span

Variety of Themes
 Variety of Activities
 Time Required for Enactment of a Theme
 Variety of Roles or Identifications
 and Personifications
 Number of Children Involved

VI. CONCLUSIONS AND RECOMMENDATIONS	86
Summary and Conclusions	
Limitations of This Study	
Recommendations for Further Study	
APPENDIXES	96
A. Plan of Study and Rating Sheet as Submitted to Judges	
B. Manual of Directions	
C. Floor Plan of Nursery School Room	
D. Schedules of Activities	
E. Chart of Intervals of Observation	
BIBLIOGRAPHY	121

LIST OF TABLES

Table	Page
1. Judges' Ratings of Complexity Components . . .	31
2. Summary of Dramatic Play of Sally, 36-42 months, During Eight Observations	46
3. Summary of Dramatic Play of Jim, 37-43 months, During Eight Observations	49
4. Summary of Dramatic Play of Sandy, 41-46 months, During Six Observations	51
5. Summary of Dramatic Play of Sally, 47-50 months, During Five Observations	54
6. Summary of Dramatic Play of Jim, 48-50 months, During Five Observations	56
7. Summary of Dramatic Play of Mary, 50-53 months, During Four Observations	58
8. Summary of Dramatic Play of Sandy, 51 months, During One Observation	59
9. Summary of Dramatic Play of Bruce, 51-54 months, During Six Observations	61
10. Summary of Dramatic Play of Jon, 54-59 months, During Two Observations	63
11. Summary of Dramatic Play of Paul, 60-64 months, During Five Observations	65
12. Distribution in Five Age Levels of Variety of Themes Enacted	73
13. Distribution in Five Age Levels of Variety of Activities Enacted	76
14. Distribution in Five Age Levels of Time Spent in Enacting Themes	79
15. Distribution in Five Age Levels of Variety of Roles, Identifications, and Personifications	83

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Table	Page
16. Distribution in Five Age Levels of Number of Children Involved in Enactment of Themes	85

CHAPTER I

INTRODUCTION

Purpose of Study

The significance of children's play is fast becoming appreciated by increasing numbers of adults. Psychologists have long been aware of its potentialities in the study and therapy of disturbed children. Teachers and parents alike are becoming aware of the great value of play as a form of expression of children who, as yet, have limited command of language. As the awareness of the values of children's play has progressed, a greater need has been felt for a normative framework within which to better interpret the "language of play." Erikson has stated:

If we can establish the language of play with its various cultural and age dialects, we may be able to approach the problem of why it is that certain children live undamaged through what seem to be neurotic episodes, and how early, neurotic children have indicated that they have reached a deadlock.¹

Studies have been made in various areas of play activity in an effort to understand this "language of play."

¹Erik H. Erikson, "Studies in the Interpretation of Play," Genetic Psychology Monograph, XXII (1940), 561.

Alschuler and Hattwick¹ have studied extensively children's art and its relation to personality. A vast number of studies of other aspects of children's art, from 1928-1949, have been compiled by Goodenough and Harris.² Harriet Johnson³ and Marjory Bailey⁴ have written of the developmental stages in block building.

In spite of the extensive norms which have been organized for these constructive activities of play, it appears that there is a lack of study of the dramatic play of preschool age children. That this is an important lack is apparent when one realizes that dramatic play, more than any other type, is, as Hartley, Frank and Goldenson state, "a mirror of the child."⁵

...specialists such as Susan Isaacs, Erik Erikson, and Margaret Lowenfeld have found in it [dramatic play] a means by which the child works out his difficulties for himself so that he can meet the challenge of his world with confidence.⁶

¹R. H. Alschuler and L. W. Hattwick, Painting and Personality, A Study of Young Children (Vol. I and II; University of Chicago, 1947).

²F. L. Goodenough and D. B. Harris, "Studies in the Psychology of Children's Drawings," Psychological Bulletin, XLVII (1950), 369-433.

³Harriet M. Johnson, Children in the Nursery School (New York: The John Day Company, 1928), pp. 184-210.

⁴Marjory W. Bailey, "A Scale of Block Constructions for Young Children," Child Development, IV (1933) 121-39.

⁵Ruth E. Hartley, Lawrence K. Frank, and Robert M. Goldenson, Understanding Children's Play (New York: Columbia University Press, 1952), p. 16.

⁶Ibid., p. 17.

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1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

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1. The Government of the United States of America, on the one hand, and the Government of the Republic of China, on the other, have agreed to enter into a treaty of friendship and commerce, and to establish a consular system between them.

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Journal of Management Education 30(6)p.789-804

For this reason it may be that through a child's dramatic play adults can best see how the child's life is going.

Hartley, Frank, and Goldenson further state that,

The importance of some kind of normative framework by which to examine the play of the individual child cannot be overemphasized. To assess any child's general or momentary status, his teacher needs to know what most children do at given ages or within certain age ranges. In dramatic play this would require norms for such elements as complexity, emotional toning, type of role played, variations in situations, levels at which the child participates, and other children involved.¹

This study was limited to the factors of complexity of dramatic play. The purpose of this study was to develop a technique for assessing complexity of dramatic play of nursery school children.

Definition of Dramatic Play

As used in this study, dramatic play was defined as all instances in which the child through overt behavior dramatized or enacted personal experiences from real life situations or fantasy interpretations of real life situations.

It implied dramatization, construction or representation in dramatic form, which might include playing-at-a-role or identification with other persons, and personification of objects and materials.

This excluded the following isolated instances of imaginative behavior: (1) construction activities involving

¹Ibid., p. 22.

merely the use of raw materials, e.g., making a duck out of clay or a train out of tinkertoys without then using them in play, (2) conventional games of social imitation or learning, e.g., playing Farmer in the Dell, (3) make-believe use of objects which consisted of only renaming or re-identifying objects, e.g., calling a block a baby, (4) spoken fantasies, teasing, and nonsense words, without action, e.g., saying, "I dreamed I was a fireman and..." The above expressions of imagination--simple constructions, conventional, imitative games, and "pretend" verbalizations--were excluded because of their simplicity and lack of development into a dramatic activity in which the child himself became involved.

Plan of Study

Prerequisite to a study in the complexity of dramatic play was the determination of its components. Therefore, five specific, measurable criteria of complexity of dramatic play were set up.¹ They were as follows: (1) the variety of themes in dramatic play of nursery school children, (2) the time required for the enactment of a theme, (3) the variety of roles or identifications and personifications involved within the dramatization of a theme, (4) the variety of activities involved within the dramatization of a theme, (5) the number of children involved in the dramatization of a theme.

¹See Selection of Criteria, Chap. III, p. 30.

Recognising that type or kind of theme and role would vary with the individual's background of experience, the researcher posed the following questions:

1. Variety of themes. Will the total number of various themes increase with the maturity of the child?

2. Time required for enactment of theme. Will time required for the enactment of an individual theme increase with the maturity of the child?

3. Variety of roles or identifications and personifications. Will the number of various roles and personifications within the dramatization of a theme increase with the maturity of the child?

4. Variety of activities. Will the number of varied activities within a theme increase with the maturity of the child?

5. Number of children involved. Will the number of children involved in the enactment of a theme increase with the maturity of the child?

Data on these criteria of complexity were secured by observation, using a modified time sampling technique. Two questions concerning the technique were posed also, namely:

1. Could the designated components of complexity be identified in the play situation and recorded meaningfully?

2. Could the technique be productive in securing data which could be used to describe levels of complexity of dramatic play?

Answers to the questions concerning the technique and the components of complexity were sought and from the data collected a description of the trends in the development of complexity of dramatic play of children representing the age span, three years to five years and six months, was made.

The information derived from such limited observation was not meant to be conclusive evidence of the developmental stages of complexity of dramatic play, but rather indicative of the effectiveness or non-effectiveness of this method as a technique for measurement of such complexity. Loomis,¹ in reference to her technique for observing the social behavior of nursery school children, emphasized that only after an instrument is developed and much experimental work is repeated under various conditions can there be even a tentative statement of the norms in the behavior measured by the instrument.

¹Alice Marie Loomis, A Technique for Observing the Social Behavior of Nursery School Children (New York: Teachers College, Columbia University, 1931), p. 84.

CHAPTER II

REVIEW OF LITERATURE

The role of dramatic play in the imaginative life of the child may be partially revealed by a study of components of complexity--theme, role, activities, time, and children involved. The present study attempts to develop a technique for identifying and recording information which can be used to describe developing levels of complexity of dramatic play. Although there exist few studies of dramatic play, related factors have been investigated in experimental and free play situations. Such investigations, providing specific information about isolated factors related to dramatic play, are included in the following review of literature.

Imagination

The imaginative tendencies of early childhood are characteristic of the child's age and are expressed in the young child's play. The pattern of imaginative behavior, according to Rand, Sweeny, and Vincent,¹ begins gradually at about one year to eighteen months for most children.

¹Winifred Rand, Mary E. Sweeny, and E. Lee Vincent, Growth and Development of the Young Child (5th ed.; Philadelphia: W. B. Saunders Company, 1953), p. 354.

It then mounts rapidly to three or four years and remains at a fairly high point for several years until around ten to twelve when it tapers off in the child's adjustment to a real world.

Jersild¹ suggests that pretending and imitation may occur before a child is able to talk and tends to increase between two and four years of age. Changes occur in the amount of make-believe, the language, the activities, and the themes of play. He names the functions of make-believe as follows: to deal with the world in a freer manner, to reason on a lower than usual level of concentration, to allow one to be illogical and inconsistent, to combine fragments of ideas, to manipulate ideas which one only partly grasps, to mold the world nearer to one's liking, to conquer fears, to rid oneself of irritations and to overcome conditions in real life that are disturbing.

Griffith's² study of imagination in early childhood states that observers have noted, but usually misunderstood, children's long periods of daydreaming, their tendency to invent imaginary companions, to construct a world of fairyland in which to retreat from the world of sense, to dramatize in play scenes they have remembered, and to murmur aloud long conversations with toys and with absent, though

¹Arthur T. Jersild, Child Psychology (3rd ed.; New York: Prentice-Hall, Inc., 1947), pp. 417-21.

²Ruth Griffiths, A Study of Imagination in Early Childhood (London: Kegan Paul, French, Trubner & Co. Ltd., 1935), p. 6.

visualized, objects or persons. She states that two divergent explanations of the meaning of child fantasies have been offered, namely: (1) It is a preparation for adult life, an exercise in preparation for real achievement. (2) It is a temporary refusal to face reality, the psychoanalytic view. She concludes that the function is to provide the normal means for the solution of problems of development in early childhood. The problem is attacked indirectly, is often disguised by symbolism, and the subject is only vaguely aware of the end towards which he is striving. The problem is resolved gradually by a series of successively imagined solutions. The result of the process is found both in an acquisition of information by the subject and also the more prominent feature of a change in mental attitude. The change of attitude is usually from a personal and subjective point of view to a more social and objective one.

A presentation of various theories, studies, and thought on the subject of imagination from preschoolers to maturity is given by Markey.¹ She includes Sherman's view that some children should be encouraged to daydream for the sake of stimulating creative imagination since "ability to combine imagination with reality is probably the cause of the productivity of the gifted." Less intelligent children had fantasies more rarely, according to Sherman.

¹Frances V. Markey, "Imagination," Psychological Bulletin, XXXII (1935), 212-36.

Markey reports that Jersild, Markey, and Jersild also supported the finding in their statement that more intelligent children have more daydreams, and added that younger children have fewer daydreams, usually of play, while older children dream of heroism. Daydreams have more resemblance to wishes than fears. Kirkpatrick's view, states Markey, was that three to six years is predominantly the time in which free play of the imagination is contrasted with fixed sensory experiences of the immediate environment.

Through the previous studies we see that an awareness of and interest in the study of imagination in the 1920s and 1930s brought some results. Very briefly, findings indicated that very young children showed signs of imagination and that as the understandings of reality developed the imaginative behavior decreased. However, the imaginative behavior had provided important functions in intellectual, social, and emotional development.

Markey,¹ in her study of imaginative behavior of preschool children, defined imaginative behavior as "all instances in which the child through language or overt behavior dealt with objects, materials, activities, and situations as though they had properties or attributes other than those which they apparently or actually seemed to possess." She then obtained data on the frequency and

¹Frances V. Markey, "Imaginative Behavior of Preschool Children," Child Development Monographs (No. 18; New York: Bureau of Publications, Teachers College, 1935).

content of imaginative behavior as related to differences in (1) age, (2) sex, (3) I.Q., and (4) socio-economic status. Fifty-four subjects, twenty-two through fifty months old were observed during ten, fifteen-minute periods, over a span of several months. Observations of free play were supplemented by experimental situations in which an effort was made to stimulate overt imaginative behavior in response to a controlled situation. The observer used a modified diary record, observing the subject and also taking notes on other children in contact with him, teacher's suggestions, notes on participation and leadership. The items observed and recorded were as follows: (a) imaginative situation, (b) name of the child who initiated imaginative play, (c) names of individuals participating in play, (d) materials and equipment used in connection with play, (e) general behavior, (f) overt behavior indicating imagination, (g) verbalizations, (h) refusals of suggestions of games, and (i) teacher's role.

Markey's results showed individual and group differences. (1) Chronological age was more closely related to leadership in imaginative behavior than to total amount of imaginative behavior. (2) With increase in age, there was a tendency towards increase in imaginative behavior score. (3) Versatility of imaginative behavior, as indicated by total number of different situations in which the child participated, and leadership in group imaginative play apparently were somewhat more highly co-ordinated with

chronological age than were originality in imaginative behavior or total imaginative behavior. (4) Findings with respect to sex differences were not consistent. (5) Chronological age and mental age were positively correlated with observed imaginative behavior. These scores are somewhat more highly co-ordinated with mental age than with chronological age. (6) There was some evidence that among children over three years of age, children of the predominant sex in a nursery school group exhibited more imaginative behavior than children of the sex which was in the minority, due to the fact that they played primarily in sex groups. Markey found that it was possible to classify categories of imaginative behavior into sequences. Imaginative naming and use of objects and personification were predominantly characteristic of the imaginative activities up to three years of age. At three years and over, there was more use of constructive activities with raw materials, dramatic play, and elaborate imaginative situations. Dramatic play, in which the child assumed a role, occurred at thirty-six months and showed consistent increase in occurrence through fifty months.

From the general study of imagination of young children evolves an interest, among observers, in dramatic play. Among children, dramatic play seems to increase in occurrence through the preschool years and is easily observed by adults.

Dramatic Play

According to Johnson,¹

Dramatic play should be regarded as one of the methods of establishing one's relation with the world in which one lives and of expressing the feeling, the emotion, which is aroused by contacts and experience.

Lerner and Murphy² also relate dramatic play to reality by saying:

Eliminating family experiences as too obviously projective in one way or another, we may say that we have not found a child who played garbage man, aviator, or going to South America, who did not have some important roots in his experience for this activity--either in participation or in terms of identification with a relative or figure in his story. The content of a child's play always represents something that he has taken in, however reorganized, distorted, or colored it may be by his own projection of it.

Johnson³ states that it is in the process of making an event "his own" that a child may call upon fantasy rather than fact. Heffernan⁴ in work with kindergarten children found that every experience extending into the community tended to increase the child's perception and to provide background for increasingly meaningful and satisfying play.

¹Harriet M. Johnson, "Dramatic Play in Nursery School," Progressive Education, VIII (1931), 19.

²E. Lerner and L. B. Murphy, "Methods for the Study of Personality in Young Children," Monograph of the Society for Research in Child Development (Vol. VI, No. 30; 1941), p. 49.

³Johnson, p. 18.

⁴Helen Heffernan, "Dramatic Play in Kindergarten," Grade Teacher, LXXV (February, 1958), 14.

In miniature the child is able to recreate for himself the world of reality, get inside the world, identify himself with it, understand it, and control it.

That a child's dramatic play is linked to reality is irrefutable. Bost and Martin¹ studied the role of dramatic play in the young child's clarification of reality. Their assumption was that the young child has two worlds of equal importance, the world of fantasy and the world of reality, and that reality is clarified through imaginative play. Their problem was to attempt to determine the roles and significance of play in the child's growth and understanding. Specifically, they sought answers to whether the child could distinguish between reality and fantasy in his dramatic play. Also, they asked whether the child's concepts of physical, social, and moral reality and thought processes and reasoning were clarified through dramatic play. The subjects were nineteen children in the five year kindergarten. The procedure included planned experiences of trips, movies, filmstrips, pictures, toy models of trains, grocery store, and animals. Data concerning the train, grocery store, and animal themes plus housekeeping were collected for twenty days. Data were recorded in a modified diary form and a tape recording of language. The researchers concluded the following: (1) Children infrequently demonstrated distinct recognition between reality

¹T. K. Bost and C. I. Martin, "Role of Dramatic Play in the Young Child's Clarification of Reality," Elementary School Journal, LVII (February, 1957), 276-80.

and fantasy. (a) Concepts of physical reality were clarified and extended. (3) A great deal of the content of their dramatic play was given to playing out social roles and clarification of social reality. (4) They explored and clarified rudimentary concepts of good and evil. (5) Concepts of cause and effect and ability to reason hypothetically were clarified through dramatic play.

This supports Biber et al¹ who state that for seven-year-olds the bandit and cowboy replace the fireman and policeman of earlier years because, "the fireman, policeman, and family doctor and their social functions are now understood too clearly and accepted too implicitly as part of the everyday world, to be appropriate vehicles of fantasy release. The children turn instead to the dimly understood figures of bandit, cowboy, and Indian, who can still be treated as archetypes for villainy, bravery, or masterfulness."

Educators, psychologists, and greater numbers of parents are beginning to recognize the role of dramatic play in a child's development. However, they need access, say Hartley, Frank, and Goldenson,² to objective evidence concerning elements of complexity, emotional toning, type of role played, variations in situations, levels at which

¹Barbara Biber, et al., Child Life in School, A Study of a Seven-Year-Old Group (New York: E. P. Dutton and Company, Inc., 1942).

²Hartley, Frank, and Goldenson, pp. 22-23.

the child participates, and other children involved, in order to examine the play of the individual child. Markey's study of imaginative behavior of preschool children (as presented earlier in this chapter) seems to be the only normative outline of dramatic play for the preschool years.

The present study of complexity of dramatic play of nursery school children examines five components of complexity: (1) the variety of themes in dramatic play of nursery school children, (2) the time required for the enactment of a theme, (3) the variety of roles and personifications involved within the dramatization of a theme, (4) the variety of activities involved within the dramatization of a theme, and (5) the number of children involved in the dramatization of a theme. A discussion of the studies relating to these components of complexity follows.

Choice of Play Materials and Activities

In so far as the present researcher has been able to determine, no studies of a child's choice of theme and role in dramatic play have been made. However, a number of studies have been made concerning a child's preference for certain toys in terms of difference in age and sex.

Bridges¹ measured the occupational interests of three-year-old children by the child's preference in selection of toys and the time devoted to the interest. The

¹K. M. B. Bridges, "Occupational Interests of Three Year Old Children." Pediatric Seminary and Journal of Genetic Psychology, XXXIV (1927), 415-23.

play of six boys and four girls, two years and six months through three years and eight months, was observed during their one-hour free play period for an average of nineteen days. The children's choices were between Montessori apparatus, domestic toys, and other kinds of toys. The Montessori cylinders, color matching, and building with large bricks had strong appeal. Boys seemed to have more singleness of interest and to prefer active, bodily actions. Girls' interests were more diverse, and they enjoyed sitting at a table with manipulative toys. The average length of time spent at one activity was seven minutes for boys and nine minutes for girls.

Benjamin¹ offered 100 subjects, fourteen months to six years old, a choice of six toys: car, girl doll, horse, vanity case of powder, airplane, and a boy doll. They were allowed to play with them for thirty minutes and then to choose one to keep. He found the following results: (1) Three toys showed conclusive sex differences, whether measured by final choice or by length of time with which child handled them during the play period: car was masculine; girl and boy dolls were feminine. (2) Sex differences in choice of car and of girl and boy dolls were found throughout the various age levels. (3) In sixty percent of the cases it was impossible to predict the final choice from the amount of time spent in playing with particular

¹H. Benjamin, "Age and Sex Differences in the Toy Preference of Young Children," Journal of Genetic Psychology, XLI (1932), 417-29.

toys.

The problem of what difference existed between girls and boys in their choice of blocks as play materials in early childhood levels was studied by Farrell.¹ Her subjects included thirteen groups of children, a total of 376, from three years through seven years and six months. She used a questionnaire for background information and then made ninety-two observations during the school year, of self-chosen indoor activities. She found that twenty-four percent of the boys played with blocks and that five percent of the girls did. Of the total length of time recorded for block play, ninety-nine percent of it was reported for boys and fifty-five percent for girls. She stated that there are possibilities that factors other than sex differences may be influential in block play at early childhood education levels.

Brown² attempted to investigate and analyze the nature and extent of young children's preference for objects and activities characteristic of their own or the appropriate sex. He assumed that whether a person is male or female, socially and psychologically, (in terms of sex-role behavior) is in large measure dependent upon learning, environmental factors, and experiential development. His

¹Muriel Farrell, "Sex Differences in Block Play in Early Childhood Education," Journal of Educational Research, LI (1957), 279-84.

²Daniel G. Brown, "Sex Role Preference in Young Children," Psychological Monographs, LXX (No. 421; 1956).

subjects were kindergarten children, seventy-eight boys and sixty-eight girls, from five years and four months to six years and four months. A sex role preference scale, "It Scale for Children," was used. It was made up of thirty-six picture cards depicting various subjects, figures, and activities commonly associated with masculine or feminine roles. The results showed: (1) Group sex-role patterns in which there existed definite, relatively dichotomous sex-role preference patterns in boys and girls. (2) Mixed or ambiguous sex-role patterns in which acceptance of components of both male and female roles was twice as frequent in girls as in boys. (3) Inverted sex-role patterns in which some children in both groups showed considerable inversion of sex-roles, more frequent in girls than in boys. (4) Masculine-feminine role preference in which there was comparatively greater preference of boys for masculine role than of girls for feminine role. (5) Toy preference in which a greater percentage of girls than boys preferred each of eight female toy objects, while a greater percentage of boys than girls preferred each of eight male toy objects.

Pauls and Smith¹ studied the sex-role learning of five-year-olds in terms of two aspects, his self-perception in terms of complying with the appropriate sex role and his perception of parental delineation of his sex-role. The subjects included ten boys and ten girls who were only

¹Lydia Boyce Pauls and Walter D. Smith, "Sex Role Learning of Five Year Olds," Journal of Genetic Psychology, LXXIX (1956), 105-17.

children and ten boys and eight girls who had one or more older, like-sexed siblings and no older siblings of opposite sex. They were shown three sets of pictures paired for sex appropriateness and sex inappropriateness. The four primary results were: (1) Boys tended to choose masculine activities more often than did girls. (2) Only children chose sex-appropriate activities more often than did children with older like-sexed siblings. (3) Children of both sex groups perceived the parents as preferring the activity appropriate for the child's sex more often than preferring sex-inappropriate roles for the child. (4) There was no difference between frequency with which only children perceived parents as preferring sex-appropriate roles.

The results of the studies of a child's choice of play materials and activities in terms of differences in age and sex may have implications for the study of a child's choice of theme, role, and activities, three components of complexity of dramatic play in the present study.

Attention Span

Time required for enactment of a theme is related to the attention span. Children's attention spans and concentration in play have been studied in experimental situations and in free play activities of nursery school classes.

The child's ability for attention and concentration in play was determined in an experimental situation by Moyer and Gilmer.¹ The subjects were 681 children from eighteen months through seven years. The experimenters observed one child at a time playing with six toys selected to satisfy some needs of the child at any given age. Toys were designed to cover as wide an age range as possible, to involve some problem-solving motivation within the range of children's abilities, and to be durable, safe, and attractive. The researchers concluded that: (1) Attention spans in children are measurable within certain definite limits. (2) In relatively non-distracting play situations the mean length of time children will concentrate in play with toys depends primarily on the use of the right toy for the right age. (3) The closer a toy comes to satisfying the particular needs of the child at his or her developmental age, the higher will be the play value of the toy. The data showed that there is no regular increase in attention spans of children from year to year for toys specifically designed for maximum holding power.

Moyer and Gilmer² also made an experimental study of preschool children's preferences for block shapes and

¹Kenneth E. Moyer and B. vonHaller Gilmer, "Attention Spans of Children for Experimentally Designed Toys," Journal of Genetic Psychology, LXXXVII (1955), 187-201.

²Kenneth E. Moyer and B. vonHaller Gilmer, "Experimental Study of Preferences and Uses of Blocks in Play," Journal of Genetic Psychology, LXXXIX (1956), 3-10.

sizes used for play in a relatively non-distracting situation, the frequency of individual block usage, and a measurement of attention spans. The subjects were eighty-seven boys and girls who were, three, four, and five years old. The children were observed playing with 300 blocks, of ten different sizes and shapes. The researchers found: (1) a consistent preference in choice of shape and size, (2) older children making more structures, (3) greater variety of names given by older children to structures, (4) mean attention spans of 22.3, 25.3, 28.8 minutes, for three, four, and five year olds, respectively.

Thompson¹ trained a twin to modify her play behavior with respect to attention characteristics. Specifically he trained her to channelize her play, to keep her at whatever task she started, to prevent her more rapid activity shifts, to minimize her postural activity diversions, and to help her relate her activities into an organized whole. Twins, three years and seven months old, were brought to the clinic for forty-five minute play periods, twice a week, for a total of twenty-five periods. One twin was put into a room supervised by a neutral adult. The test twin was in an identical room supervised by an adult who gave encouragement lavishly, helped her when she encountered a task beyond her knowledge or ability,

¹H. Thompson, "The Modifiability of Play Behavior With Specific Reference to Attention Characteristics," Journal of Genetic Psychology, LXXXIX (1943), 165-88.

suggested further activity whenever she started to divert, and accompanied any denial with a positive suggestion. The researcher concluded that: (1) Play behavior observation may be used to study attention characteristics. (2) The duration, variation, and tempo of the focus of attention in unrestricted activity are fundamental and individual characteristics, which persist from age to age. (3) Scope of attention can be restricted by training. (4) An individual may give evidence of being disturbed by this restriction in scope if training is prolonged. (5) Even though modifications in scope may be imposed by training, the individual tends to revert to previous attention patterns in a relatively novel situation.

Eighty children, forty subjects two years old and forty subjects four years old, were observed by Herring and Koch,¹ to discover whether any relationship exists between the interest span of preschool children in a play situation and the following variables: age, sex, time of day, type of toy, length of occupation under a general situation, and intelligence as measured by a standardized test. The playthings were new to most children and sufficiently interesting to keep subjects occupied for one hour. Some of the results were as follows: (1) Average interest span of young children increased somewhat with age. The

¹A. Herring and H. L. Koch, "A Study of Some Factors Influencing the Interest Span of Preschool Children," Journal of Genetic Psychology, XXXVIII (1930), 249-79.

interest span, as measured, was revealed to be a function of the type of toy offered for play and the age of the child. It was somewhat longer for boys than for girls.

(2) The attraction power of a toy was not a perfect index of its power to sustain interest. (3) Variability shown among interest spans of the individual was as great for younger as for older children. (4) There was no significant relationship between interest span and intelligence. (5) Children did not amuse themselves with toys of their own choice any more sustainedly during the first than during the second half hour.

In these studies play was observed sometimes in an experimental situation and sometimes in a free-play situation, but always with selected play materials.

Children Involved

Play materials affected the social behavior of the child as well as his attention span.

Types of social behavior observable when two children were provided with blocks or clay as materials and variations of social behavior in these types of play corresponding to age differences were studied by Undegraff and Herbst.¹ Twenty-eight children, seventeen boys and eleven girls, from two years and six months to four years

¹R. Undegraff and E. K. Herbst, "An Experimental Study of the Social Behavior Stimulated in Young Children by Certain Play Materials," Journal of Genetic Psychology, XVII (1933), 372-91.

and two months of age, were observed playing with clay and blocks under experimental conditions. All behavior, either positively or negatively social, was recorded on an observation blank. Differences in social behavior with clay and blocks were generally; (1) Two-year-olds watched partners more during clay than block play. (2) Three year olds' social behavior was quite similar during play with clay and blocks. (3) Clay seemed to encourage watching and imitating activity. Children took suggestions and conversed. (4) Blocks fostered more mutual activity in use of materials than did clay. Chronological age influenced social behavior as follows: (1) Younger children paid less attention to partners than did older children. (2) Older children were more conscious of partners and shared each others interests for longer time. (3) Older children were more cooperative. (4) Three-year-olds offered more verbal suggestions for new uses, accepted more suggestions, conversed more, than did two-year-olds.

An experiment in block play as a socializing medium among first graders was made by Johnson.¹ Twenty-two children were allowed a block play period following discussion of the community. In teacher interviews during the first month and again five months later all children named specific buildings they liked to construct, indicating some

¹Lois V. Johnson, "A Study of Socialization in Block Play," Journal of Educational Research, L (1957), 623-26.

degree of planning. The extent to which children carried out verbal plans increased during five months from seventy-three percent to ninety-one percent. The children's expressed liking to have others visit their constructions increased from ninety-two to 100 percent. Their expressed liking to visit others increased from seventy-seven to 100 percent.

The sex difference in social acceptance and participation of preschool children was studied by McCandless and Marshall.¹ The subjects were twenty-four boys and twenty-four girls in three newly formed preschool groups. Five measures of social acceptance and participation including subjects' verbal choices, teacher judgments, and observed behavior revealed that: (1) Girls had higher sociometric scores than boys. (2) No significant sex differences existed in teacher judgments of social acceptance, observed social acceptance, degree of social interaction with peers, or degree of dependence on adults. (3) Majority of negative correlations between measure of dependence on adults and both sociometric scores and peer interaction scores were significantly larger for girls than for boys. (4) Progress of acquaintance in nursery school groups did not demonstrably affect the sex differences in sociometric scores.

¹Boyd R. McCandless and Helen R. Marshall, "Sex Differences in Social Acceptance and Participation of Preschool Children," Child Development, XXVIII (1957), 421-25.

Koch's¹ study of 360 five-and six-year-olds to determine the effect of siblings on the child's preference of playmates concluded that the characteristics of the sibling are related to the type of associates a child has as well as to the playmate preferences he develops. The results showed that: (1) As the sib age difference increased, subjects reportedly played less frequently with their sib's friends. (2) The number of playmates a child listed did not correlate to a significant degree with any of the sibling characteristics studied. Girls generally named more friends than boys. (3) Playmates, preferred playmate, best friend, were most frequently of about the subject's own age, but among playmates of dissimilar ages there was a higher incidence of older than of younger, relative to the subject. (4) Chosen children were more frequently those of child's own sex than of opposite sex.

Stott and Ball² checked records of sixty children for a ten year period, from two or three years old to over thirteen years old, to study the consistency and change in ascendance-submission in the social interaction of children. They concluded that readiness of the organism is the first requisite to social interaction. Children must learn to be

¹Helen L. Koch, "The Relation in Young Children Between Characteristics of Their Playmates and Certain Attributes of Their Siblings," Child Development, XXVIII (1957), 175-202.

²Leland H. Stott and Rachel Stutsman Ball, "Consistency and Change in Ascendance-Submission in the Social Interaction of Children," Child Development, XXVIII (1957) 259-72.

socially responsive and interactive. The amount as well as the quality of social behavior they develop would seem to depend upon environment. In the nursery school situation with its abundant opportunity for social experience, patterns and varieties of interactive behavior develop rapidly.

It was among preschool children that Parten¹ established the six categories of social participation as unoccupied, onlooker, solitary, parallel, associative, and co-operative. She observed each of forty-two children for one minute daily at the same hour every day, over a period of four months.

Green² discusses the progression of group play at length in her study on group play and quarrels among preschool children. She found the amount of group play increased with age, the size of the group in which the children played increased with age, interest in other children made its most marked development between the ages of three and five and dramatic play was the most social activity in which these children engaged. In Green's³ study of friendships and quarrels she makes the point that though the

¹Mildred B. Parten, "Social Participation Among Pre-School Children," Journal of Abnormal and Social Psychology, XXVII (1932), 243-69.

²E. H. Green, "Group Play and Quarreling Among Preschool Children," Child Development, IV (1933), 302-07.

³E. H. Green, "Friendships and Quarrels Among Preschool Children," Child Development, IV (1933), 237-52.

friendship indices increase regularly with age, that from two to three years of age the increase is due to an increase in number of friends, but from three to five it is due to increase in depth of friendship. She states, "The tendency for children to decrease the number of different companions as they grow older, and at the same time to increase the frequency of their companionship with a few individual children, suggests that development in social relations, like that in physical motor and mental traits, proceeds from general to specific."

CHAPTER III

PROCEDURE

Selection and Validity of Criteria

Hartley, Frank, and Goldenson,¹ discuss the value of normative standards of dramatic play.² From their writing, supplemented by discussion with teachers in the field of child development, and after preliminary observation, five criteria were set up which were thought to be measurable components of complexity of dramatic play. They were: (1) variety of themes and time required for enactment, (2) variety of roles or identifications and personifications, (3) variety of activities, (4) uses of language, (5) number of children involved.

These criteria, with the plan for study, were submitted to five judges who were asked to rate each component as a measure of complexity.³ The judges were representative of three nursery schools, one at Bowling Green State University, Ohio, and two at Michigan State University, and the Departments of Teacher Education and Psychology at

¹Hartley, Frank, Goldenson, p. 16.

²See Chap. I, p. 2.

³Plan of Study and Rating Sheet as Submitted to Judges, Appendix.

Michigan State University. They were considered qualified to rate the validity of each component because of their professional training and interest in, and experience with children.

The ratings of the components of complexity by five judges are shown in Table 1. They used a 0-5 rating scale: 4-5 being a judgment of excellent validity, 3-4 good validity, 2-3 average validity, 1-2 fair validity, 0-1 poor validity.

TABLE 1
JUDGES' RATINGS OF COMPLEXITY COMPONENTS

Components of Complexity	Judges' Ratings					Average	Evaluation
	J.1	J.2	J.3	J.4	J.5		
Variety of themes and time required	4.5	4.5	3.75	2.5	4.0	3.85	Good
Roles, identifications, and personifications	4.5	4.5	4.25	4.5	4.0	4.35	Excellent
Variety of activities	4.5	4.5	4.25	3.5	5.0	4.35	Excellent
Uses of language	2.5	4.5	4.5	0.5	-	3.00	Good
Number of children	4.5	4.5	4.5	4.5	4.25	4.45	Excellent

On the basis of the judges' recommendations, "Uses of Language" component was eliminated. Two judges gave it a poor rating. One judge was unable to rate it.

1. 2017年12月31日，A公司“应付账款”科目所属各明细科目的期末贷方余额如下：应付甲公司账款100000元，应付乙公司账款200000元，应付丙公司账款300000元，应付丁公司账款400000元。2018年1月1日，A公司“应付账款”科目所属各明细科目的期初贷方余额如下：应付甲公司账款100000元，应付乙公司账款200000元，应付丙公司账款300000元，应付丁公司账款400000元。2018年1月，A公司发生以下经济业务：

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10. *Journal of the American Statistical Association*, 93(443), 1033-1041.

$$= \{ \pi^{\pm 1} (1 + \beta \pi^2) \pm \beta \pi^2 \mid \beta \in H \cup \{ \frac{1}{2} \pi \} \cup \{ \pi \} \} \cup \{ \pi \}$$

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971) using a Shimadzu 1601 UV-Visible Spectrophotometer.

• **2011** **1-1**

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Lichtenthaler and Whistler (1973).

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[illegible]

• *Journal of the American Medical Association* 2000; 283: 2669-2676

Comments and suggestions included: "Some very complex dramatic play could proceed with no language at all."

"...you need to increase the number of language categories.

...if some items are scored, all items must be scored."

"This language factor is confounded with several other factors."

With the exception of the criterion, "Uses of Language," no single rating was below 2.5, average validity. On the basis of the averages of the judges' ratings of one good and three excellent, the other four criteria were considered valid.

Variety of themes and time required for enactment were made separate components, as they were not necessarily related or dependent upon each other.

After revision, five specific criteria retained were as follows: (1) the variety of themes in dramatic play of nursery school children, (2) the time required for the enactment of a theme, (3) the variety of roles or identifications and personifications involved within the dramatization of a theme, (4) the variety of activities involved within the dramatization of a theme, (5) the number of children involved within the dramatization of a theme. These five criteria were judged to be some valid indications of complexity of dramatic play which could be observed and recorded.

Method of Observation

With the selected criteria of complexity of dramatic play established, it was necessary to develop a method of observation which would be reliable; that is, it would produce uniform results when used repeatedly by the same observer, or among several simultaneous observers, or by persons who wished to repeat the experiment.

Jahoda¹ suggests that in descriptive studies, which are structured only in broad terms, a method of systematic observation of small groups be used. These observations may be coded afterwards to permit the establishment of well defined forms of behavior which can be recorded more speedily and more comprehensively.

In the collection of data a modified time sampling method was used. Wright² describes time sampling as

...a closed procedure which fixes attention of observer and analyst upon selected aspects of the behavior stream as they occur within uniform and short time intervals. The length, spacing, and number of intervals are intended to secure representative time samples of the target phenomena. As a rule, with exceptions, descriptive categories are coded in advance for quick and precise judgments in the field and later efficient scoring.

In this study descriptive material was recorded which was then categorized to provide a subsequently more refined and efficient method of recording.

¹Marie Jahoda, Morton Deutsch, and Stuart W. Cook, Research Methods in Social Relations, Part One: Basic Processes (New York: The Dryden Press, 1951), pp. 134-46.

²Herbert F. Wright, "Observational Child Study," Handbook of Research Methods in Child Development, ed. Paul H. Mussen (New York: John Wiley & Sons, Inc., 1960) p. 93.

A series of time samples were then simultaneously recorded by the researcher and two trained observers. The three observers met three days, at weekly intervals, making two, fifteen minute observations, each day, for a total of six observations. A comparison of records was made and a discussion of differences was held following each day's observations. After final comparison of records and discussion of differences, a manual of definitions and directions for observation was developed. The terms used in stating components of complexity were further defined for increasing reliability of observations.

Theme. The theme was defined as the core around which the play was organized. Examples: housekeeping, doctor play, fireman play.

Playing-at-a-role or identification. Playing-at-a-role and identification were used synonymously. Playing-at-a-role was defined as the enactment of a role as a form of pretense. This identification was usually with a person who was not present. Example: conversation in houseplay, "I'm mother; you be the big sister."

Personification. Personification was the attribution of personal nature or characteristics to inanimate objects or abstract notions. Therefore, personification generally needed an object which was being personified. Example: A boy, seeing toy soldiers floating in a tub of water, cried: "They say 'Help'." He was personifying the inanimate soliders.

Children involved. All children in the immediate social situation in which the enactment of the theme was in progress, who did not refuse to participate, and were not excluded from the participation by the subject being observed, were considered involved in the dramatic play. A child's overt behavior may or may not have indicated his involvement.

Using the Manual of Directions¹ the researcher and one trained observer simultaneously made three, fifteen-minute observations. Their records were almost identical. Although all the observations for the collection of actual data used in analysis were made by the researcher, it was felt that the period of trial observation and revision of directions helped to clarify terms and methods and so make it possible to record the same components on repeated observations.

Method of Analysis

A method of analysis of the diary records of each subject was devised to provide a means of evaluating the complexity of dramatic play in terms of the criteria selected. Themes, roles and personifications, and activities were identified, categorized, and totaled.² The time required for the enactment of a theme and the number of children involved were also totaled.

¹Manual of Directions, Appendix.

²See Categories of Themes and Roles, Chap. IV. pp. 41-44.

The totals were then used to describe the complexity of each subject's dramatic play¹ and to answer the questions concerning the five components of complexity.² The development of trends of complexity of children's dramatic play from the age of three years to five and one-half years of age was described.³

¹See Description of the Level of Complexity of Dramatic Play of Each Subject, Chap. V, pp. 45-66.

²See questions concerning five components of complexity, Chap. I, p. 5.

³See Development of Trends of Complexity, in Terms of Criteria, Over Two and One-half Year Span, Chap. V, pp. 67-85.

CHAPTER IV

COLLECTION AND ANALYSIS OF DATA

Time and Place of Study

The observations in this study were made in the nursery school of the Campus School, at State University of New York, College of Education, at Buffalo. Observations were begun in December 1957, after school had been in session three months, and continued at monthly intervals through May 1958, with supplemental observations from October 1958, through January 1959.

The nursery school room was large and divided into play areas to make it possible for active play in the housekeeping and large block areas and still prevent interferences with areas of comparative quiet for art activities, table toys, and books.¹ The housekeeping and large block areas were the settings for most of the dramatic play.

The schedule of activities provided for a daily indoor free play period of about forty-five minutes, upon the children's arrival at nursery school.² During this period adult direction was at a minimum although adults occasionally were asked to join in the play and did so for

¹Floor Plan of Nursery School Room, Appendix.

²Schedule of Activities, Appendix.

short periods of time.

Since the campus school was used as a laboratory for the college students there were many students in and out of the nursery school. There was one permanent teacher, a new student teacher each nine-week period, and from one to five participating students at a single time. In recognition of this situation, when the children's play seemed to be unduly influenced by the presence of many adults the researcher discarded the observation.

The children who attended Campus School were, in general, representative of the upper middle and upper socio-economic groups, according to Cattell's Metric Scale of Social Status.¹ Fifteen, three-year-old children, eight boys and seven girls, attended from nine to eleven o'clock in the morning, and eighteen, four-year-old children, nine boys and nine girls, attended from one to three o'clock in the afternoon.

Selection of Subjects

From the thirty-three children enrolled in the Campus Nursery School, ten children were selected for study. They were chosen according to chronological age so that there were two children from each of five, six-month levels, from three years to five years and six months. Attempt was made to select subjects whose birthdays were

¹Raymond B. Cattell, "The Concept of Social Status," Twentieth Century Psychology, ed. P. L. Harriman, (New York: Philosophical Library, 1946), p. 141.

closest to the beginning of the age range which they represented.

The plan of selection approximated a longitudinal study of preschool children. A longitudinal study has the advantage of measuring the persistency of a pattern of behavior over a span of time. Since a true longitudinal study was outside the scope of this research, its approximation was chosen, with awareness of the limitations due to sex differences, individual variation in rates of maturation, and unreliability of chronological age as a single criterion of maturity level.

In the final data, the available subjects' ages approximated a longitudinal study as follows:

Girls	36-42 mo.	41-46 mo.	47-51 mo.
			51 mo.
			50-53 mo.

Boys	37-43 mo.	48-50 mo.	54-59 mo.	60-64 mo.
		51-54 mo.		

Three subjects were from families in the Upper Class, Social Grade II; two subjects in the Upper, Middle Class, Social Grade III; and two subjects in the Upper, Middle Class, Social Grade IV.

Period of Observation

Monthly observations were begun in December 1957, and continued through May 1958, with supplemental observations from October 1958, through January 1959. They were

made at intervals, representing twenty-three of the thirty months span from three years to five and one-half years.¹

A fifteen minute interval was selected as the unit of observation time. During each interval all dramatic play of the subject was observed, and in one observation dramatic play may have continued for a maximum of fifteen minutes, or it may have been of shorter duration if the subject ceased his involvement in dramatic play before the fifteen minute period was terminated. Attempt was made to secure two, fifteen-minute observations, or a maximum of thirty minutes per month, of each child, for each of six months. This would provide a total of twelve observations of dramatic play over a six-month period, for each of ten children.

Obligations of the teacher-observer, absences of subjects, and programming to accommodate college students made the full realization of this aim impossible. To compensate for absences of subjects, age forty-seven months through fifty-one months during the initial six-month period, subjects of this age range were observed for four months the following year, October 1958, through January 1959. This provided a total of 450 minutes of observations, divided among seven subjects, and representative of a thirty-month span.

¹Chart of Intervals of Observation, Appendix.

Categories of Themes and Roles

After data were collected by observation and recorded as time samples, it became possible to organize data within categories for more reliable evaluation of descriptive information.

Themes were identified either by the role, e.g., Zorro, Mother, which the subject played; or by the specific environmental setting or construction, e.g., hollow block zoo, rocking boat, doll house, around which activity centered. They tended to be of two types: (1) realistic, imitative, adult, activities concerning the home and occupation and (2) vicarious experiences which were childish, imaginative interpretations of, movies, television shows, or stories.

After recognizing these two types of play, the researcher organized the various themes according to the following classification: (1) housekeeping, e.g., caring for baby, cooking, (2) occupational play, e.g., building a house, delivering milk, driving a bus, (3) vicarious experiences, e.g., chasing ghosts, flying like Superman.

Upon analysis of data, it became evident that houseplay was the most highly developed type of dramatic play. This is understandable when one realizes that young children are most aware of this activity because it is closest to their realm of living. Hartley¹ states,

¹Ruth E. Hartley and Robert M. Goldenson, The Complete Book of Children's Play (New York: Thomas Y. Crowell Company, 1957), pp. 72-73.

THE HISTORY OF THE UNITED STATES

The history of the United States is a story of a people who have grown from a small colony of English settlers to a great nation of free men and women. The story begins in 1492 when Christopher Columbus discovered the New World. The first English settlers came to the Americas in 1607, and the first American Revolution was fought in 1776. The United States has since grown to become one of the most powerful nations in the world. The story of the United States is a story of a people who have fought for freedom and justice, and who have built a great nation.

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"...a game of house flourishes in short order. Each one knows what it means to be a member of a family and each can find a role to fit into." Due to the higher degree of complexity and organization of houseplay it was necessary to further divide it into sub-themes. The following is the list of sub-themes of houseplay and the types of activities which they might include.

Laundry--sort, wash, iron, fold, and put away clothes

Washing dishes--stacking, preparing dishwater, washing, wiping, putting dishes away

Cooking--getting out equipment, mixing, stirring, baking, cooking, storing or serving food

Cleaning (care of house)--getting out equipment, sweeping, washing, mopping, moving furniture, straightening, or putting away, repairing

Child care--dressing, putting to bed, feeding, baby

Social interaction--going for walk, shopping, telephoning

Care of person--dressing up, washing hands, sleeping, eating

Due to the imitative qualities of much of the children's houseplay, houseplay activities were fairly easy to recognize as relating to real-life activities, and therefore were grouped according to the preceding categories.

The children's concepts of occupational activities were less realistic and, consequently, more difficult for adult observers to recognize, name, and categorize. For this reason the sub-themes were not pre-determined but named as they occurred. The variety of occupations ranged from milkman, and helicopter, to "automatic window" operation. Ten occupational sub-themes were observed. After a greater number of observations of occupational themes it might be possible to group them further and so delimit the number of possible sub-themes in the same way as house-keeping sub-themes are limited.

Vicarious experience themes also varied and were impossible to pre-determine. Therefore sub-themes of vicarious experiences were also named as they occurred. Ten vicarious sub-themes were observed.

The various roles and personifications were organized according to the following classification.

1. Family members, e.g., mother, sister, father, baby
2. Occupational workers, e.g., milkman, fireman, cowboy
3. Fictitious personalities, e.g., Zorro, ghosts
4. Animals or live creatures, e.g., lions, elephants, snakes
5. Vehicles of transportation, e.g., boats, snowplows, trains

It was possible to describe in comparative terms, the

1. The first step is to identify the problem.

2. The second step is to define the problem in terms of specific, measurable, achievable, relevant, and time-bound (SMART) objectives.

3. The third step is to identify the causes of the problem.

4. The fourth step is to identify the stakeholders who are affected by the problem.

5. The fifth step is to develop a plan of action.

6. The sixth step is to implement the plan of action.

7. The seventh step is to monitor and evaluate the progress of the plan of action.

8. The eighth step is to report on the results of the plan of action.

9. The ninth step is to review the results of the plan of action.

10. The tenth step is to revise the plan of action as needed.

11. The eleventh step is to communicate the results of the plan of action.

12. The twelfth step is to celebrate the success of the plan of action.

13. The thirteenth step is to learn from the experience.

14. The fourteenth step is to share the results of the plan of action.

15. The fifteenth step is to continue to improve the plan of action.

16. The sixteenth step is to evaluate the overall impact of the plan of action.

17. The seventeenth step is to report on the overall impact of the plan of action.

18. The eighteenth step is to review the overall impact of the plan of action.

19. The nineteenth step is to revise the overall impact of the plan of action.

20. The twentieth step is to continue to improve the overall impact of the plan of action.

21. The twenty-first step is to communicate the overall impact of the plan of action.

22. The twenty-second step is to celebrate the overall success of the plan of action.

23. The twenty-third step is to learn from the overall experience.

24. The twenty-fourth step is to share the overall results of the plan of action.

25. The twenty-fifth step is to continue to improve the overall impact of the plan of action.

26. The twenty-sixth step is to evaluate the overall impact of the plan of action.

27. The twenty-seventh step is to report on the overall impact of the plan of action.

28. The twenty-eighth step is to review the overall impact of the plan of action.

29. The twenty-ninth step is to revise the overall impact of the plan of action.

30. The thirtieth step is to continue to improve the overall impact of the plan of action.

level of complexity of dramatic play of each of the subjects, by using these categories of themes and roles.

CHAPTER V

FINDINGS

Description of the Level of Complexity of Dramatic Play of Each Subject

Sally

Biographical Data

Sally, an adopted girl, was observed when she was thirty-six through forty-two months old, and again when forty-seven through fifty months old. She had two brothers, one, three and one-half years older, and one, three years younger. Her father was a college graduate and a lawyer. Her mother had attended business college and was a housewife. The family's socio-economic status was Upper Class, Social Grade II.¹

Description by Teacher

Sally was an energetic, physically active child. Her attention span was becoming longer in self-directed activities but was still relatively short in directed group activities or story time. She was quite gregarious and enjoyed dramatic social play with both girls and boys. She was friendly with and trusting of adults. Although she usually solved her own problems, she came for help when necessary. Being independent seemed very important to her and she tried many things which were too difficult for her. She enjoyed teasing and being mischievous. Although agreeable when reproved by an adult, she did not always change her behavior. Her language development was good. (Her mother seemed to set high standards for her and to be discontented with Sally's behavior. She often frowned at Sally.)

¹Cattell, p. 141.

1. *Chlorophyll a* (Chl *a*)

NO. 4441 FILE NO. 1441 4/17/54

11.

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808

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Journal of Management Inquiry 18(6)

[illegible]

• 100 •

TABLE 2

SUMMARY OF DRAMATIC PLAY OF SALLY, 36-42 mo.
DURING EIGHT OBSERVATIONS

Theme: Housekeeping		Time: 65 min.	
<hr/>			
N. of Activities in N. of Obs.			
23	Cooking	5	
24	Cleaning	5	
16	Dishwashing	4	
10	Laundry	1	
21	Social	5	
8	Child care	2	
<u>3</u>	Care of person	2	
<hr/>			
Tot. Act. 105			
<hr/>			
Roles: Family member: Mother or daughter			
<hr/>			
N. of other children:		Range: 1-4 per 1 obs.	
		Total: 23 in 8 obs.	
<hr/>			
Theme: Occupational		Time: 2 min.	
<hr/>			
N. of Activities in N. of Obs.			
<u>5</u>	Milk delivery	1	
<hr/>			
Tot. Act. 5			
<hr/>			
Roles: Occupational worker: Milkman			
<hr/>			
N. of other children:		None	

Description of Dramatic Play

Thirty-six through forty-two months of age

Sally, from thirty-six through forty-two months of age, participated in dramatic play for a total of sixty-seven minutes during eight observations, over a six-month period (December 2, 1957, through May 28, 1958). The housekeeping theme predominated while the occupational theme occurred once. She was usually a family member and during occupational play an occupational worker.

The theme for eight observations and a total of sixty-five minutes was housekeeping. Within the theme, a total of 105 activities was observed. Sally's role as family member was often designated as that of mother or daughter. The number of other children involved in Sally's play in any one situation varied from one to four, a total of twenty-three during the eight observations.

During one observation, Sally was involved in the theme of occupational play for two minutes. Her five milkman activities included collecting "empty" bottles and then delivering milk to the refrigerator. No other children were involved.

Jim

Biographical Data

Jim, a boy, was observed when he was thirty-seven through forty-three months of age and again when forty-eight through fifty months of age. He had two sisters, one, two and one-half years older and the other, five years older. His father was a college graduate with a Bachelor of Science degree, and a salesman. His mother

1. What is the purpose of the document?

[illegible]
$$A_{\text{eff}} = A_0 - \frac{A_0^2}{2} \left(\frac{1}{A_0} + \frac{1}{2} \frac{A_0^2}{A_0^2} \right) = A_0 - \frac{A_0^2}{2} \left(\frac{1}{A_0} + \frac{1}{2} \right) = A_0 - \frac{A_0}{2} - \frac{A_0^2}{4} = \frac{A_0}{2} - \frac{A_0^2}{4}$$

— *Journal of the American Medical Association*, 1967, 201: 1001-1002.

$\mu_{\text{eff}} = 1.7$ is used, and the results for the two cases are compared.

DOI: 10.1002/for

For the same kind of the following things we find the same results:

[illegible]

- vertical line of common to other lineal units applied

16. Fuchs, D. and J. J. Schaeffer, 1969. *Mathematical Methods in Population Biology*. Macmillan, New York.

3. Small child - The person was under 14 years

Journal of Interpersonal Violence 28(12)

• *Journal of the American Statistical Association*, 1997, 92, 1039-1052

Abstracts of the following articles are included in this Special Issue:

Journal of the Philosophy of Education Society of Great Britain, 35, 1, 2004, pp. 1–15.

doi:10.1016/j.jmb.2010.04.017

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DOI: 10.1177/1056492609358000
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© 2004 Blackwell Publishing Ltd *Journal of Internal Medicine* 255: 105–112

— *John, the son of the carpenter, and his 12 disciples, including Peter*

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[illegible]

• *Chlorophyll a* and *Chlorophyll b* were determined using a spectrophotometer (Shimadzu UV-1601U) at 663 nm and 646 nm, respectively. The concentrations of chlorophylls were calculated using the following equations:

had attended college for one year and was a housewife. The socio-economic status of the family was classed as Upper, Middle Class, Social Grade IV.¹

Description by Teacher

Jim had become quite sociable since the beginning of the year. He had formed two quite fast friendships and seemed to enjoy other children's company as well. His play was rough and consequently he was often careless with equipment and heedless of his and other people's safety. However, he was usually responsive to adult guidance. On occasion he had been unexpectedly shy or sensitive to adult reproach. His attention span was short and his interests were varied.

Description of Dramatic Play

Thirty-seven through forty-three months of age

Jim, from thirty-seven through forty-three months of age, participated in dramatic play for a total of fifty-four minutes, during eight observations, over a six-month period (December 5, 1957, to May 28, 1958). His play concerned two themes in which he assumed two major roles.

During six observations, totaling forty-three minutes, the theme was housekeeping. With a total of seventy-six activities, Jim engaged in from one to three sub-themes during any one observation. His role during each of the observations was that of a family member which was not further differentiated. On one occasion he was also an occupational worker, a doctor. A total of ten children engaged in his six housekeeping play situations, the number varying from zero to four in any one observation.

¹Ibid.

- **Highly sensitive** to changes in the environment, especially to changes in the social environment

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1. The first step in the process of the
 2. investigation is the identification of the
 3. problem. This is done by the investigator
 4. who is responsible for the investigation.
 5. The next step is the collection of data.
 6. This is done by the investigator who is
 7. responsible for the investigation. The data
 8. is then analyzed and the results are
 9. reported to the management. The management
 10. then decides on the course of action to be
 11. taken. The investigator is then responsible
 12. for the implementation of the plan. The
 13. results are then reported to the management.
 14. The management then decides on the course of
 15. action to be taken. The investigator is then
 16. responsible for the implementation of the plan.
 17. The results are then reported to the management.
 18. The management then decides on the course of
 19. action to be taken. The investigator is then
 20. responsible for the implementation of the plan.

1. What is the purpose of the document?

cc: "On a line, see it- that report was- 10/10"

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• for other countries and regions of the world not covered

1991-1993 - limited, mostly negative impact

1. Die in der Tat...
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and a fact that the β -phase is not a true thermodynamic phase.

1. What is the purpose of the document?

• I agree to no part of what I have just said, and may say.

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7

TABLE 3

SUMMARY OF DRAMATIC PLAY OF JIM, 37-43 mo.
DURING EIGHT OBSERVATIONS

Theme: Housekeeping		Time: 43 min.	
---------------------	--	---------------	--

N. of Activities in N. of Obs.			
27	Cooking	3	
22	Cleaning	3	
4	Dishwashing	2	
13	Social	3	
4	Child care	1	
<u>6</u>	Care of person	2	

Tot. Act. 76

Roles: Family member:	
Occupational worker: Doctor	

N. of other children:	Range: 1-4 per 1 obs.
	Total: 10 in 6 obs.

Theme: Occupational		Time: 11 min.	
---------------------	--	---------------	--

N. of Activities in N. of Obs.			
2	Helicopter	1	
7	Fireplay	2	
<u>5</u>	Construction	1	

Tot. Act. 14

Roles: Occupational worker	
----------------------------	--

N. of other children:	Range: 1-2 per 1 obs.
	Total: 4 in 3 obs.

Occupational play was the theme for eleven minutes, during three observations. He played the role of occupational worker during all of the fourteen activities. There was a total of four other children included in the three occupational play situations.

Sandy

Biographical Data

Sandy, a girl, was observed when she was forty-one through forty-six months of age and again when fifty-one months of age. She had three siblings: a sister two years older, a sister four years older, and a brother seven years older. Her father was an English teacher in a private boy's school and held Bachelor of Arts and Master of Arts degrees. Her mother was a college graduate with a Bachelor of Arts degree and a housewife. The family's socio-economic status was Upper Class, Social Grade II.¹

Description by Teacher

Sandy was an enjoyable, happy, gregarious girl. She had socialized with one or two special friends since September and had been responsible for organizing much of the group play. Her friendly acceptance of other children had made her a leader. She was aware of her surroundings and capable of talking intelligently about them. She had shown a particular interest in books, "reading," and house-play. She was quite cautious in climbing, balancing, jumping, and other active physical play. One favorite activity was dancing with the dancing skirts, during which she combined creativity with imitation.

Description of Dramatic Play

Forty-one through forty-six months of age

Sandy, from forty-one through forty-six months of age, participated in dramatic play for a total of fifty-eight minutes, during six observations, over a five month

¹Ibid.

[illegible]

1. *Journal of the American Medical Association*, 1990; 263: 1025-1026.

1. *Phragmites australis* (Cav.) Trin. ex Steud.

1. The first step in the process of the investigation is the identification of the problem. This is done by the investigator who is responsible for the investigation. The investigator must identify the problem and the scope of the investigation.

THE UNIVERSITY OF CHICAGO

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TABLE 4

SUMMARY OF DRAMATIC PLAY OF SANDY, 41-45 mo.
DURING SIX OBSERVATIONS

Theme: Housekeeping		Time: 35 min.	
---------------------	--	---------------	--

N. of Activities in N. of Obs.			
23	Cooking	2	
4	Cleaning	1	
2	Dishwashing	1	
4	Laundry	1	
20	Social	4	
5	Child care	1	
<u>5</u>	Care of person	2	

Tot. Act. 63

Roles: Family member: Mother or daughter

N. of other children:		Range: 0-5 per 1 obs.	
		Total: 10 in 4 obs.	

Theme: Vicarious Experiences		Time: 23 min.	
------------------------------	--	---------------	--

N. of Activities in N. of Obs.			
8	Whale chase	1	
<u>14</u>	Cowboys	2	

Tot. Act. 22

Roles: Fictitious personality: Whale chaser, Zorro,
Lone Ranger

N. of other children:		Range: 1-3 per 1 obs.	
		Total: 6 in 3 obs.	

period (December 9, 1957, to May 5, 1958). Her play was developed around two themes in which she assumed two major roles.

Housekeeping was the theme during four observations for a total of thirty-five minutes. Sandy's play involvement varied in time from relatively short (three minutes) to very long (play in progress when observation was begun and still in progress when fifteen minute observation was terminated). Within the theme of houseplay she engaged in all seven sub-themes. There was a total of sixty-three housekeeping activities during the four observations. During each of the observations, Sandy was a family member, either a mother or a daughter. She played with a total of ten children in four housekeeping play situations with the number in a single observation varying from none to five.

Vicarious experiences was the theme for three observations and a total of twenty-three minutes. The sub-themes were varied. The sub-theme of one vicarious experience might be called whale chase. The eight activities within the sub-theme included: getting in the boat, jumping out of the boat and running from the whale, sitting on the ladder where the whale can't catch them, running back to boat, moving whale (wheelbarrow) away from boat, getting gun (block), shooting with gun, and putting gun away. The sub-theme on two succeeding days was cowboys. There was a total of fourteen activities varying from shooting and galloping to making a bed of blankets on the floor and

sleeping. Eight whale-chase activities and fourteen cowboy activities gave a total of twenty-two for the two vicarious themes. Sandy played the role of a fictitious personality in each of these sub-themes. She was a whale chaser in the boat sequence and Zorro and The Lone Ranger while playing cowboys. She played with a total of six children in the three observations.

Sally¹

Description of Dramatic Play

Forty-seven through fifty months of age

Sally, from forty-seven through fifty months of age, was observed five times for a total of sixty-seven minutes. During this three-month period (October 20, 1958, through January 19, 1959), she participated mostly in the houseplay theme and once in an occupational theme. Her role was a family member in both themes.

The sixty minutes of houseplay during the five observations contained 115 activities in six of the seven sub-themes. Her role as family member varied, including mother, baby, daughter, and sister. She played with thirteen children during the five observations, the number varying from one to five per observation.

The occupational theme, lasting for seven minutes during one observation might be sub-titled housebuilding. The five activities were simple building procedures by

¹See Sally, Chap. V, p. 45.

THE PROBLEM

The problem is to find a function $f(x)$ which is continuous on the interval $[a, b]$ and satisfies the conditions $f(a) = A$ and $f(b) = B$. The function $f(x)$ is assumed to be continuous on the interval $[a, b]$ and to satisfy the conditions $f(a) = A$ and $f(b) = B$. The function $f(x)$ is assumed to be continuous on the interval $[a, b]$ and to satisfy the conditions $f(a) = A$ and $f(b) = B$. The function $f(x)$ is assumed to be continuous on the interval $[a, b]$ and to satisfy the conditions $f(a) = A$ and $f(b) = B$.

THE PROBLEM

THE PROBLEM

THE PROBLEM

TABLE 5

SUMMARY OF DRAMATIC PLAY OF SALLY, 47-50 mo.
DURING FIVE OBSERVATIONS

Theme: Housekeeping		Time: 60 min.	
<hr/>			
N. of Activities in N. of Obs.			
7	Cooking	2	
19	Cleaning	3	
19	Dishwashing	4	
8	Social	3	
11	Child care	1	
<u>51</u>	Care of person	5	
Tot. Act. 115			
<hr/>			
Roles: Family member: Mother, baby, daughter, sister			
<hr/>			
N. of other children:		Range: 1-5 per 1 obs.	
		Total: 13 in 5 obs.	
<hr/>			
Theme: Occupational		Time: 7 min.	
<hr/>			
N. of Activities in N. of Obs.			
<u>5</u>		1	
Tot. Act. 5			
<hr/>			
Roles: Family member: Baby			
<hr/>			
N. of other children:		Total: 4 in 1 obs.	

• $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$ (probability of getting two heads in two tosses)

• $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$ (probability of getting two tails in two tosses)

• $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$ (probability of getting one head and one tail in two tosses)

• $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$ (probability of getting one tail and one head in two tosses)

• $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$ (probability of getting one head and one tail in two tosses)

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• $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$ (probability of getting one tail and one head in two tosses)

Sally who defined her role as that of baby. There were four other children involved in the development of the theme.

Jim¹

Description of Dramatic Play

Forty-eight through fifty months

Jim, from forty-eight months through fifty months, was observed five times, for a total of forty-five minutes, over a three-month period (October 30, 1958, through January 19, 1959). There were three themes, during which he assumed two roles.

Housekeeping was the theme for one observation of five minutes. Jim was a family member who was involved in four activities of dishwashing. He played by himself.

Occupational play included thirty-three activities in the development of three sub-themes, during the three observations, totaling thirty-one minutes. There were fourteen fireplay activities, eight construction activities, eleven ship activities, each occurring in separate observations. He was an occupational worker and played with a total of five other children during the three occupational play situations.

Vicarious experiences were bombing "ghosts" and war, for a total of nine minutes during two observations. There were nine activities of bombing ghosts and six war

¹See Jim, Chap. V, p. 47.

TABLE 6

SUMMARY OF DRAMATIC PLAY OF JIM, 48-50 mo.
DURING FIVE OBSERVATIONS

Theme: Housekeeping		Time: 5 min.	
N. of Activities in N. of Obs.			
<u>4</u>	Dishwashing	1	
Tot. Act.	4		
Roles: Family member			
N. of other children:		None	
Theme: Occupational		Time: 31 min.	
N. of Activities in N. of Obs.			
14	Fireplay	1	
8	Construction	1	
<u>11</u>	Ship	1	
Tot. Act.	33		
Roles: Occupational worker			
N. of other children:		Range: 0-3 in 1 obs. Total: 5 in 3 obs.	
Theme: Vicarious		Time: 9 min.	
N. of Activities in N. of Obs.			
9	Bombing ghosts	1	
6	War	1	
Tot. Act.	15		
Roles: Occupational worker:		Bomber man	
N. of other children		Range: 1-2 in 1 obs. Total 3 in 2 obs.	

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activities in separate observations. Jim was an occupational worker in each sub-theme: once a "bomber man," once undefined. Three other children participated in this dramatic play.

Mary

Biographical Data

Mary was observed when she was fifty through fifty-three months of age. She had one brother, one year younger. Her father was educated at the United States Merchant Marine Academy and was field representative. Her mother had a college education and was a housewife. The family's socio-economic status was Upper, Middle Class, Social Grade III.¹

Description by Teacher

Mary was a very happy and enjoyable child. She was very friendly and accepting and the children liked her. She seemed capable of solving social problems which arose. Houseplay had been a favorite activity and she was quite imaginative in dramatic play. She seemed to organize much of the play in the doll area. She was self-assured and made contributions to group activities and discussions. She was eager and willing to participate in the activities of nursery school.

Description of Dramatic Play

Fifty through fifty-three months of age

Mary, from fifty through fifty-three months of age, participated in dramatic play for a total of fifty minutes, during four observations, over a three-month period (December 5, 1957, to March 3, 1958). Her play was limited to the theme of housekeeping during which she was a family member.

¹Cattell, p. 141.

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The fifty minutes devoted to housekeeping were divided among six of the seven sub-themes with a total of eighty-five activities in the four observations. During each of the observations, Mary was a family member, either a mother or a daughter. She played with a total of ten children during the four housekeeping play situations.

TABLE 7

SUMMARY OF DRAMATIC PLAY OF MARY, 50-53 mo.
DURING FOUR OBSERVATIONS

Theme: Housekeeping		Time: 50 min.
N. of Activities in N. of Obs.		
28	Cooking	3
24	Cleaning	3
11	Laundry	1
13	Social	2
3	Child care	2
<u>6</u>	Care of person	2
Tot. Act. 85		
Roles: Family member: Mother or daughter		
N. of other children:		Range: 2-4 per 1 obs. Total: 10 in 4 obs.

Sandy¹

Description of Dramatic Play

Fifty-one months of age

Sandy, fifty-one months of age, was observed once for ten minutes on October 21, 1958. She was involved in

¹See Sandy, Chap. V, p. 50.

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Lichtenthaler and Whistler (1973).

Figure 1. The effect of the number of trials on the mean accuracy of the responses ($n = 10$) as a function of the number of trials per condition ($n = 10$). The error bars represent the standard error of the mean.

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

• **What is the purpose of the study?** The purpose of the study is to determine the effect of the use of a mobile phone on the performance of a simulated driving task.

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- $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$: 25%
- $\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$: 12.5%

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1. *Phragmites australis* (Cav.) Trin. ex Steud.

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the theme of housekeeping play and assumed the role of family member. During the theme she carried out nineteen activities and she played with four other children.

TABLE 8

SUMMARY OF DRAMATIC PLAY OF SANDY, 51 mo.
DURING ONE OBSERVATION

| | | | |
|--------------------------------|----------------|--------------------|--|
| Theme: Housekeeping | | Time: 10 min. | |
| <hr/> | | | |
| N. of Activities in N. of Obs. | | | |
| 7 | Cooking | 1 | |
| 7 | Dishwashing | 1 | |
| <u>5</u> | Care of person | 1 | |
| Tot. Act. 19 | | | |
| <hr/> | | | |
| Roles: Family member | | | |
| <hr/> | | | |
| N. of other children: | | Total: 4 in 1 obs. | |

Bruce

Biographical Data

Bruce was observed when he was fifty-one through fifty-four months of age. He had one brother, two years younger. His parents were divorced during the time of the study. His father possessed a Bachelor of Arts degree and was a manufacturing business executive while his mother also possessed a Bachelor of Arts degree and was a housewife. The socio-economic status of the family was Upper, Middle Class, Social Grade III.¹

Description by Teacher

Bruce was an affectionate, sensitive boy. His attention span was short and his interests were varied.

¹Cattell, p. 141.

1. The first and most important factor in determining the success of a business is the quality of the product or service offered. A high-quality product or service is essential for attracting and retaining customers.

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• **DATE :** 08/11/2019 **DATE :** 08/11/2019

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| 1 | linked | A |
| 2 | unlinked | B |
| 3 | unlinked | C |

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Source: <http://www.fishbase.org>. Species names are in italics. Species with a question mark are those that have been reported but not confirmed. Species with an asterisk are those that have been reported but not confirmed. Species with a dagger are those that have been reported but not confirmed.

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1. The first step is to identify the key components of the system. This includes understanding the hardware, software, and data involved.

1. *What is the purpose of the study?*

1. The total value of the property is \$100,000.
 2. The value of the property is \$100,000.

[illegible]

• 1991 •

He seldom participated in the vigorous and active play of the other boys. He seemed to prefer playing doctor, pouring water, or looking at books. He showed much creativity in his response to music, recognized rhythms in everyday sounds, picked out tunes on the piano, etc. His play had been limited to a couple of special friends. Without them he was at a loss and became quite unhappy. He especially liked to be recognized before the group--sing a song, show and tell, etc. He was very friendly with adults and formed close attachments to them.

Description of Dramatic Play

Fifty-one through fifty-four months of age

Bruce, from fifty-one through fifty-four months of age, was observed participating in dramatic play six times for a total of fifty-one minutes, over a five and one-half month period (December 4, 1957, through May 21, 1958).

During these observations he assumed two major roles in the development of three themes.

The housekeeping theme occurred three times for a total of twenty-eight minutes and thirty-five activities. Eight other children were involved in the three housekeeping play situations.

Occupational play was the theme for two observations with a total of eleven minutes. There were ten train activities and six doctor activities. Bruce's occupational roles were ticket man and doctor. He played with seven other children during the two occupational themes.

Dramatization of prisoners in a fort was the action of the twelve minute observation of the theme of vicarious experiences. There were twelve activities during which Bruce was an occupational worker, apparently a prison guard. Five other children participated in the enactment of the theme.

TABLE 9

SUMMARY OF DRAMATIC PLAY OF BRUCE, 51-54 mo.
DURING SIX OBSERVATIONS

| | | | |
|---|-------------------|-----------------------|--|
| Theme: Housekeeping | | Time: 28 min. | |
| N. of Activities in N. of Obs. | | | |
| 15 | Cooking | 1 | |
| 11 | Dishwashing | 1 | |
| <u>9</u> | Social | 2 | |
| Tot. Act. | 35 | | |
| Roles: Family member | | | |
| N. of other children: | | Range: 0-4 per 1 obs. | |
| | | Total: 8 in 3 obs. | |
| Theme: Occupational | | Time: 11 min. | |
| N. of Activities in N. of Obs. | | | |
| 10 | Train | 1 | |
| <u>6</u> | Doctor | 1 | |
| Tot. Act. | 16 | | |
| Roles: Occupational worker: Ticket man, doctor. | | | |
| N. of other children: | | Range: 1-6 in 1 obs. | |
| | | Total: 7 in 2 obs. | |
| Theme: Vicarious Experiences | | Time: 12 min. | |
| N. of Activities in N. of Obs. | | | |
| <u>12</u> | Prisoners in fort | 1 | |
| Tot. Act. | 12 | | |

TABLE 9 Continued

Roles: Occupational worker: Prison guard

N. of other children:

Total: 5 in 1 obs.

Jon

Biographical Data

Jon was observed when he was fifty-four through fifty-nine months old. He had one brother, two and one-half years older and a sister, two years younger. His father was a lawyer with both a Bachelor of Arts and a Bachelor of Laws degree. His mother had a Bachelor of Arts degree and was a housewife. The family's socio-economic status was Upper Class, Social Grade II.¹

Description by Teacher

Jon seemed an unusual child. He was extremely curious about the "whys" of things. He meditated about statements and related them to his previous knowledge. "Turtles' eyes are shaped like keyholes." "A toad's skin and bones are loose." He had a very retentive memory. He often offered suggestions about solving problems in play and group activities. At times he showed concern over maintaining his "manly" status--"Girls do that. It's sissy stuff." He set high social goals for himself and when frustrated (e.g., told by friends that he cannot play with them) he became quite tense and excited. When tense he masturbated and talked excitedly. He played with the recognized leaders and led as well as followed in their play. (His mother had commented about his extreme competition with older brother. He often played with brother's friends and he frequently fretted that he wanted "to learn something"--to write, add, speak French, etc.)

Description of Dramatic Play

Fifty-four through fifty-nine months of age

Jon, from fifty-four through fifty-nine months, participated in dramatic play for a total of thirty minutes

¹Ibid.

Section 1

Section 1: General Provisions

Section 1: General Provisions

and

Section 2

Section 2: Specific Provisions

Section 3

Section 3: Additional Provisions

Section 4

Section 4: Final Provisions

during two observations, December 9, 1957, and May 7, 1958. His play developed one theme, while he assumed two roles.

The dramatization of the vicarious experiences theme involved nineteen wolf activities for fifteen minutes during one observation. In a second observation of fifteen minutes there were ten snake and two zoo activities. Jon assumed the role of two animals or live creatures, a wolf and a snake, and the role of an occupational worker, a hunter. There were five other children involved in the enactment of the vicarious theme in two observations.

TABLE 10

SUMMARY OF DRAMATIC PLAY OF JON, 54-59 mo.
DURING TWO OBSERVATIONS

| | | |
|------------------------------------|-------|-----------------------|
| Theme: Vicarious Experiences | | Time: 30 min. |
| N. of Activities in N. of Obs. | | |
| 19 | Wolf | 1 |
| 10 | Snake | 1 |
| <u>2</u> | Zoo | 1 |
| Tot. Act. 31 | | |
| Roles: Occupational worker: Hunter | | |
| Live creatures: Wolf, snake | | |
| N. of other children | | Range: 2-3 per 1 obs. |
| | | Total: 5 in 2 obs. |

- The first step is to identify the problem and the goal of the project.
- The second step is to gather information and resources.
- The third step is to develop a plan and a timeline.
- The fourth step is to implement the plan and monitor progress.
- The fifth step is to evaluate the results and make adjustments.
- The sixth step is to communicate the results and share the knowledge.
- The seventh step is to reflect on the experience and learn from it.
- The eighth step is to celebrate the success and acknowledge the team.
- The ninth step is to document the process and the results.
- The tenth step is to review the project and make improvements for the future.

Conclusion

- The project was completed successfully and the goals were achieved.
- The team worked well together and the communication was effective.

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Paul

Biographical Data

Paul was observed when he was sixty through sixty-four months of age. He had one sister, three and one-half years older. His father and mother both had college educations. His father was a sales representative and his mother a housewife. The socio-economic status of the family was Upper, Middle Class, Social Grade IV.¹

Description by Teacher

Paul was a very mature, independent child. He assumed responsibility for his actions and responded readily to adult reasoning. However, he was often less tolerant of other children's less mature behavior and was sometimes dictatorial in his demands upon them. When frustrated he would strike out. His physical development was extremely good and he enjoyed active play. He also showed real mechanical ability. He had a ready sense of humor which was occasionally turned into silliness when encouraged by his friends.

Description of Dramatic Play

Sixty through sixty-four months of age

Paul, from sixty through sixty-four months, was observed engaged in dramatic play for a total of thirty-nine minutes during five observations, over a three-and-one-half-month period (January 10, 1958 through April 29, 1958). He developed three themes and assumed three major roles.

He participated in ten activities in the housekeeping theme during one observation of two minutes. He was a family member and included one other child in his housekeeping play.

¹Ibid.

TABLE 11

SUMMARY OF DRAMATIC PLAY OF PAUL, 60-64 mo.
DURING FIVE OBSERVATIONS

| | | | |
|--|------------------------|---|--|
| Theme: Housekeeping | | Time: 2 min. | |
| <hr/> | | | |
| N. of Activities in N. of Obs. | | | |
| 3 | Cooking | 1 | |
| 5 | Cleaning | 1 | |
| <u>2</u> | Dishwashing | 1 | |
| Tot. Act. 10 | | | |
| <hr/> | | | |
| Roles: Family member | | | |
| <hr/> | | | |
| N. of other children: | | Total: 1 in 1 obs. | |
| <hr/> | | | |
| Theme: Occupational Play | | Time: 17 min. | |
| <hr/> | | | |
| N. of Activities in N. of Obs. | | | |
| 9 | Construction for boats | 1 | |
| <u>4</u> | Automatic window | 1 | |
| Tot. Act. 13 | | | |
| <hr/> | | | |
| Roles: Vehicles of transportation: Snowboat, street cleaner, plow, fast-moving boat
Occupational worker | | | |
| <hr/> | | | |
| N. of other children: | | Range: 3-4 per 1 obs.
Total: 7 in 2 obs. | |
| <hr/> | | | |
| Theme: Vicarious Experience | | Time: 20 min. | |

TABLE 11 Continued

| N. of Activities in N. of Obs. | | |
|--------------------------------|-------------------|---|
| 9 | Cowboy | 1 |
| <u>16</u> | Good and bad buys | 1 |
| Tot. Act. | 25 | |

Roles: Occupational worker

N. of other children: Range: 4 per 1 obs.
 Total: 8 per 2 obs.

Seventeen minutes were spent during the two observations of occupational play, in nine activities making constructions for boats, and four activities with an "automatic window." During the boat sub-theme Paul personified a snowboat, street cleaner, plow, and fast-moving boat, all vehicles of transportation. In the second theme he was an occupational worker. He played with seven children in the two occupational play situations.

The theme of vicarious experiences, observed for twenty minutes during two observations included nine cowboy activities and sixteen "good" and "bad buy" activities. During each sub-theme Paul was an occupational worker. Eight other children were included in the two play situations.

1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 26

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion. The number of people aged 65 and over is expected to increase from 200 million to 400 million. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion.

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- The "right" kind of people have been selected to carry out the
 mission. They are the best of the best, and they are the only ones who
 can do the job.

— 199 — *Journal of the American Medical Association*, Chicago, Ill., June 1, 1917, p. 1717.

10/10/2011 11:01 AM

1. *How do you feel about your life now?*

—1—

• *not* dependent on the local density of food and of predators

the *Journal of the American Medical Association*, "The American Medical Association is not a political organization, and it is not the business of the Association to take any position on political issues."

- *Journal of the American Medical Association*, 1997; 277: 1000-1001

• *“The 1990s will be the decade of the Internet,”* says the *“New York Times.”*

10. *Journal of the American Statistical Association*, 1997, 92, 1023-1032.

- *Chlorophyll a* and *Chlorophyll b* were determined using a spectrophotometer.

100

Development of Trends of Complexity, in Terms of Criteria,
Over Two and One-half Year Span

The preceding descriptions of the levels of complexity of dramatic play were presented in terms of individual subjects. Observations of individual subjects were also grouped according to age levels in order to present the development of trends of complexity in terms of criteria. The total two and one-half year span was divided into five intervals, each six months in length. At the first interval, thirty-six through forty-one months, three subjects, two girls and one boy, were observed thirteen times. At the second interval, forty-two through forty-seven months, three subjects, two girls and one boy, were observed eleven times. At the third interval, forty-eight through fifty-three months, five subjects, three girls and two boys, were observed eighteen times. At the fourth, fifty-four through fifty-nine month interval, two boys were observed four times; and at the fifth interval, from sixty through sixty-five months, one boy was observed five times.

The following is a discussion of development of trends of complexity of dramatic play over the two and one-half year span, in terms of the criteria--theme, activities, time, roles, and children involved.

Variety of Themes
(Table 12)

There was no evidence of a developing trend in the average number of themes enacted per an observation period

of eleven minutes.¹ There were only four observations in the entire age range, thirty-six through sixty-five months, during which more than one theme occurred in a single observation. This may be accounted for by the limit of a fifteen-minute sample of the individual's play, of which the average time devoted to dramatic play, among all age levels, was nine minutes. Attention spans of children in this study, even at thirty-six months, may have been sufficiently developed to enable them to engage in only one theme for a nine-minute interval.²

To compare further the developmental levels in terms of variety of themes, larger samples of observations were taken from each level. To secure the greatest total number of minutes of observation common to all levels, thirty-six minute samples were taken from each developmental level. Four observation records of nine minute

¹Observations were not of equal length. The average number of minutes per observation varied at different age levels as follows: 7.8, 8.3, 11.1, 10, 7.8. The greatest average was 11.1 minutes. In order to compare the number of themes from various age levels, they were equated according to the following formula:

$$\frac{\text{Total themes in each level}}{\text{Total minutes observation at each level}} \times \text{Greatest average number of minutes of observation} =$$

Number of themes in an eleven minutes observation period.

(e.g., at thirty-six through forty-one months interval-- $\frac{14}{101} \times 11 = 1.52$ themes in an eleven minute observation)

²See p. 77 for further discussion of length of time spent in one theme.

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periods (the average number of minutes per observation at all levels), representing different subjects, were selected. The numbers of various themes in these samples were compared. All three themes occurred at each level except the first, where only two themes occurred. The housekeeping and occupation themes occurred throughout the five intervals of the two and one-half year age span. No vicarious play occurred at the first level, but it did at the succeeding four levels.

There were also indications of trends in the percentages of dramatic play devoted to the specific themes at various age levels. Percentage of total number of dramatic play themes devoted to the housekeeping theme decreased as the child's age increased. The percentages were 78.6, 61.5, 63.2, 25.0, 20.0, at thirty-six through forty-one months, forty-two through forty-seven, forty-eight through fifty-three, fifty-four through fifty-nine, and sixty through sixty-five months, respectively.

The incidence of occupational play tended to increase, though unevenly, with age, from 21.4 percent at thirty-six through forty-one months to 40.0 at sixty through sixty-five months. Other percentages were 15.4 at forty-two through forty-seven months, 21.1 at forty-eight through fifty-three, and 25.0 at fifty-four through fifty-nine months.

The percentage of the total number of dramatic play themes devoted to the vicarious play theme showed some

tendency to increase with the child's age. The percentages increased rather irregularly from .0 at thirty-six through forty-one months, 23.1, at forty-two through forty-seven months, 15.8 at forty-eight through fifty-three months, to a high of 50.0 at fifty-four through fifty-nine months, and then dropped to 40.0 at sixty through sixty-five months.

It is possible to relate the developing trends in variety of themes to various aspects of the increasing maturity of the child, using Landreth's¹ definition of maturation as,

... the total developmental process, which obviously is a product of the interaction of developmental factors within the organism, learning processes, environmental circumstances, and inherited behavior capacities.

The change in emphasis of type of theme from housekeeping to occupational play may have been also a factor of sex. If both age and sex were influencing factors, increasing maturity and accompanying closer identification with like-sexed adults may have been reflected in a child's dramatic play, and have caused an increased incidence of housekeeping theme as girls matured, a decreased incidence as boys matured; an increased incidence of occupational play as boys matured, a decreased incidence as girls matured. Hartley and Goldenson² state, "From this time on four years old⁷, as the sexes begin to go their separate ways,

¹Catherine Landreth, The Psychology of Early Childhood (New York: Alfred A. Knopf, 1958), p. 291.

²Hartley and Goldenson, The Complete Book of Children's Play, p. 95.

boys and girls are apt to spend their imaginative lives in different worlds." There were possible indications of these influences in the percentages of time devoted to various themes when computed according to boys and girls. There was a consistent decrease in frequency of the housekeeping theme as boys matured--66.6, 66.6, 30.0, 25.0, 20.0 percents, from lowest to highest levels, respectively. There was some increase, though uneven, in frequency of housekeeping theme as girls matured--87.5 percent at thirty-six through forty-one months, 60.0 at forty-two through forty-seven months, and 100.0 at forty-eight through fifty-three months. There were no girl subjects in the last two levels. Occupational trends were as follows: boys' percentages increased with age--33.3, 33.3, 40.0, 25.0, 40.0; girls' percentages decreased with age--12.5, 10.0, 00.0. Lack of girl subjects at the last two levels hindered comparisons of results in terms of influence of sex.

A widening environment may also have been a causal factor in the trend of selection of themes. The housekeeping theme for both boys and girls, predominated at the early age of thirty-six through forty-one months, at which time the child usually has been almost exclusively in the home with his mother and her activities. As the child's environment normally widens there was a greater proportion of occupational themes and finally a larger proportion of dramatization of vicarious experiences, perhaps due to

developing imagination and exposure to television, books, and movies. Hartley and Goldenson¹ support this when they say,

Naturally their [four year olds] play reflects what they see going on about them, plus what they have heard about, or come to know through radio and television and these samplings will largely reinforce them in their natural inclination toward traditional roles--with, or course, a few modern wrinkles added.

Due to the small number of subjects and limited minutes of observation there was not sufficient data to justify such generalizations concerning incidence of theme and causal factors at this time. However, these trends seemed to warrant further investigation.

Variety of Activities (Table 13)

There was no apparent trend in the average number of various activities per eleven minute observation.² The greatest number occurred at the thirty-six through forty-one month interval and the least number at the fifty-four through fifty-nine month level.

¹Ibid.

²Observations were equated to provide for comparison of activities in the same manner as for comparison of themes.

$$\frac{\text{Total activities in each level}}{\text{Total minutes of observation at each level}} \times \frac{\text{Longest average number of minutes of observation}}{11}$$

Number of activities in an eleven minute observation

(e.g., at thirty-six through forty-one month interval--

$$\frac{172}{101} \times 11 = 17.6$$
 activities in an eleven minute observation period).

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

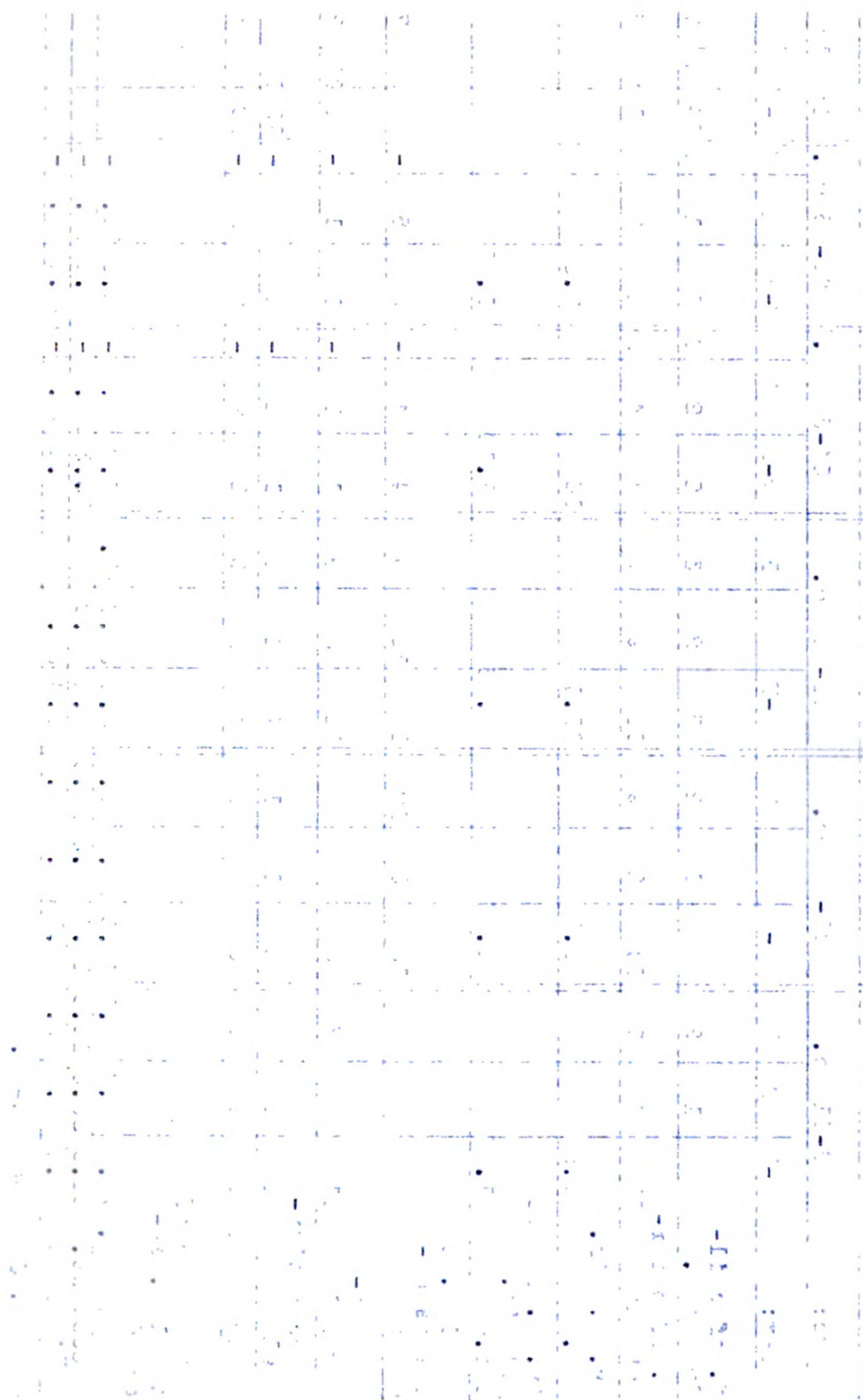
...the ... of ...

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TABLE 12
DISTRIBUTION IN FIVE AGE LEVELS OF
VARIETY OF THEMES ENACTED

| Age: | 36-41 mo. | | | 42-47 mo. | | | 48-53 mo. | | | 54-59 mo. | | | 60-65 mo. | | | Totals | | |
|--|-----------|------|------|-----------|------|------|-----------|------|------|-----------|------|---|-----------|------|---|--------|----|----|
| | M-F | M | F | M-F | M | F | M-F | M | F | M-F | M | F | M-F | M | F | M-F | M | F |
| N. of chil-
dren obs. | 3 | 1 | 2 | 3 | 1 | 2 | 5 | 2 | 3 | 2 | 2 | 0 | 1 | 1 | 0 | 14 | 7 | 7 |
| N. of obser-
vations | 13 | 6 | 7 | 11 | 2 | 9 | 18 | 9 | 9 | 4 | 4 | 0 | 5 | 5 | 0 | 51 | 26 | 25 |
| Av. N. min./
obs. | 7.8 | | | 8.3 | | | 11.1 | | | 10 | | | 7.8 | | | | | |
| Av. N. Themes
/11 min.
obs.* | 1.52 | | | 1.56 | | | 1.05 | | | 1.10 | | | 1.41 | | | | | |
| Total N. of
themes en-
acted | 14 | 6 | 8 | 13 | 3 | 10 | 19 | 10 | 9 | 4 | 4 | - | 5 | 5 | - | 55 | 28 | 27 |
| House-
keeping | 11 | 4 | 7 | 8 | 2 | 6 | 12 | 3 | 9 | 1 | 1 | - | 1 | 1 | - | 33 | 11 | 22 |
| Occupation-
al | 3 | 2 | 1 | 2 | 1 | 1 | 4 | 4 | 0 | 1 | 1 | - | 2 | 2 | - | 12 | 10 | 2 |
| Vicarious | 0 | 0 | 0 | 3 | 0 | 3 | 3 | 3 | 0 | 2 | 2 | - | 2 | 2 | - | 10 | 7 | 3 |
| Percentage of
total N. en-
acted | | | | | | | | | | | | | | | | | | |
| Housekpg. | 78.6 | 66.6 | 87.5 | 61.5 | 66.6 | 60.0 | 63.2 | 30.0 | 10.0 | 25.0 | 25.0 | - | 20.0 | 20.0 | - | | | |
| Occupat. | 21.9 | 33.3 | 12.5 | 15.4 | 33.3 | 10.0 | 21.1 | 40.0 | 00 | 25.5 | 25.0 | - | 40.0 | 40.0 | - | | | |
| Vicarious | 00.0 | 00.0 | 00.0 | 23.1 | 00.0 | 30.0 | 15.8 | 30.0 | 00 | 50.0 | 50.0 | - | 40.0 | 40.0 | - | | | |

*See p. 68 footnote 1.



Handwritten notes or a legend on the right side of the page, possibly explaining the symbols or numbers used in the grid.

The trend in the percentages of the total number of activities, devoted to activities within the various themes, closely resembled the trend in the occurrence of the themes themselves. There was a general decrease in the percentage of housekeeping activities as age increased and a general increase in percentage of occupational and vicarious experience activities as age increased.

In an effort to determine whether or not the variety of activities within an individual theme indicated the complexity of that theme's development, other comparisons were made.

When the percentages of total number of various activities within specific themes were compared with the corresponding percentages of total number of various themes, the following results were found: The percentage of the total number of activities devoted to housekeeping was greater than the percentage of the total number of themes devoted to housekeeping, at the three lowest intervals, thirty-six through fifty-three months.¹ At the two higher age intervals, the proportion of activities devoted to the housekeeping theme was the same or less than the proportion of occurrence of housekeeping theme in total themes. These relationships of activities to theme would appear to indicate that at the lowest age levels the housekeeping theme was more complexly developed than at the higher levels. However, this may not be so much a factor of age or maturity as it is of sex, since no girls were included in the two highest age levels.

¹See Tables 12 and 13.

The percentage of the total number of activities devoted to vicarious experiences was greater than the percentage of total number of themes devoted to vicarious experiences at the two highest age levels (fifty-four through sixty-five months). At the three lower age levels the proportion of activities devoted to the vicarious experience theme was less than the proportion of occurrence of the vicarious theme in total themes. This comparison may indicate that at the higher age levels the vicarious theme was more fully developed in terms of activities than at the lower levels. This could be stated only for boys as there were no girl subjects in the two highest age levels.

There was a consistently smaller proportion of occupational activities than occupational themes at all levels. This would appear to indicate that the occupational theme was less complex than housekeeping at the lower levels and less complex than vicarious experiences at the higher levels. Hartley and Goldenson¹ ask, "How many boys have any realistic notion of what their fathers do when they leave the house for the day?"

Since insufficient data were available, the above generalizations are tentative, but appear to indicate desirability of further investigation.

¹Hartley and Goldenson, The Complete Book of Children's Play, p. 98.

1. The first part of the report deals with the general situation of the country and the position of the various groups of the population. It is a very general and superficial treatment of the subject, but it is a good starting point for a more detailed study.

2. The second part of the report deals with the economic situation of the country. It is a very detailed and thorough treatment of the subject, and it is a good starting point for a more detailed study. It deals with the various aspects of the economy, such as the agricultural sector, the industrial sector, and the services sector. It also deals with the distribution of income and the standard of living of the population.

3. The third part of the report deals with the social situation of the country. It is a very detailed and thorough treatment of the subject, and it is a good starting point for a more detailed study. It deals with the various aspects of society, such as the education system, the health system, and the social services. It also deals with the distribution of income and the standard of living of the population.

4. The fourth part of the report deals with the political situation of the country. It is a very detailed and thorough treatment of the subject, and it is a good starting point for a more detailed study. It deals with the various aspects of the political system, such as the executive branch, the legislative branch, and the judicial branch. It also deals with the distribution of income and the standard of living of the population.

TABLE 13

DISTRIBUTION IN FIVE AGE LEVELS OF
VARIETY OF ACTIVITIES ENACTED

| Age: | 36-41 mo. | 42-47 mo. | 48-53 mo. | 54-59 mo. | 60-65 mo. | Totals |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|--------|
| N. of children observed | 3 | 3 | 5 | 2 | 1 | 14 |
| N. of observations | 13 | 11 | 18 | 4 | 5 | 51 |
| Av. N. min./obs. | 7.8 | 8.3 | 11.1 | 10.0 | 7.8 | |
| Av. N. activities/
11 min. obs.* | 18.7 | 16.0 | 17.1 | 11.2 | 13.5 | |
| Total N. activities
enacted | 172 | 132 | 310 | 41 | 48 | 703 |
| Housekeeping | 156 | 102 | 240 | 6 | 10 | 514 |
| Occupational | 16 | 8 | 43 | 6 | 13 | 86 |
| Vicarious | 0 | 22 | 27 | 29 | 25 | 103 |
| Percentage of total N.
enacted | | | | | | |
| Housekeeping | 90.7 | 77.3 | 77.4 | 14.6 | 20.8 | |
| Occupational | 9.3 | 6.1 | 13.9 | 14.6 | 27.1 | |
| Vicarious | 0.0 | 16.6 | 8.8 | 70.7 | 52.1 | |

*See p. 72 footnote 2.

Time Required for Enactment of a Theme
(Table 14)

There were some inconsistencies in obtaining the time factor in this study. Observations were begun when dramatic play was already in progress. Recording was terminated at the subject's ceasing of dramatic play, the end of the fifteen minute observation period, or when play was artificially interrupted by the end of free play period, mistaken interference by college students, or by conflicting responsibilities of the teacher-observer. Although these inconsistencies could not be shown in Table XIV, the writer will make explanation as the discussion proceeds. It was noted that as the child matured there was a trend toward an increased length of time to enact an individual theme.

Within the thirty-six through forty-one month period usually it was the child who terminated the dramatic play. Two exceptions were when the observations were interrupted. The average length of time for enactment of a theme at this age level was seven minutes with eight of the thirteen themes requiring seven or fewer minutes.

At the forty-two through forty-seven month level there was one observation which lasted the fifteen minute period. There were eight instances of the subjects terminating the play. These eight themes averaged six minutes. The other observations were interrupted.

At the forty-eight through fifty-three month period the average time was ten and one-half minutes for enactment

of a theme. Eight of the nineteen themes were still in progress at the end of the fifteen minute observation period. In one observation the child left one theme for a second theme after five minutes, and the observation was terminated after fifteen minutes of dramatic play although there were two themes. In an additional six, the observations were artificially terminated, leaving only four occasions when a child left dramatic play before the end of fifteen minutes.

Within the fifty-four through fifty-nine month and sixty through sixty-five month levels play continued through the fifteen minute observation period three times and observations were interrupted in every other instance.

Therefore, there does seem to be indication of an increase in time required for the enactment of an individual theme from about seven minutes at three to four years of age to over fifteen minutes at four and one-half to five and one-half years of age.

The time spent in the three themes seemed to follow a trend. The percentage of total dramatic play devoted to the housekeeping theme tended to decrease as the child's age increased. The percentages were 91.1, 62.6, 71.0, 12.5, and 5.1, at thirty-six through forty-one months, forty-two through forty-seven, forty-eight through fifty-three, fifty-four through fifty-nine, and sixty through sixty-five months, respectively.

the first of these is the fact that the system is not a simple one, but a complex one, in which the various parts are interrelated and interdependent. The second is that the system is not a static one, but a dynamic one, in which the various parts are constantly changing and evolving. The third is that the system is not a closed one, but an open one, in which the various parts are constantly interacting with the environment. The fourth is that the system is not a linear one, but a non-linear one, in which the various parts are constantly interacting with each other in a non-linear fashion. The fifth is that the system is not a deterministic one, but a probabilistic one, in which the various parts are constantly interacting with each other in a probabilistic fashion. The sixth is that the system is not a simple one, but a complex one, in which the various parts are interrelated and interdependent. The seventh is that the system is not a static one, but a dynamic one, in which the various parts are constantly changing and evolving. The eighth is that the system is not a closed one, but an open one, in which the various parts are constantly interacting with the environment. The ninth is that the system is not a linear one, but a non-linear one, in which the various parts are constantly interacting with each other in a non-linear fashion. The tenth is that the system is not a deterministic one, but a probabilistic one, in which the various parts are constantly interacting with each other in a probabilistic fashion.

TABLE 14
DISTRIBUTION IN FIVE AGE LEVELS OF
TIME SPENT IN ENACTING THEMES

| Age: | 36-41 mo. | 42-47 mo. | 48-53 mo. | 54-59 mo. | 60-65 mo. | Totals |
|----------------------------------|-----------|-----------|-----------|-----------|-----------|--------|
| N. of children observed | 3 | 3 | 5 | 2 | 1 | 14 |
| N. of observations | 13 | 11 | 18 | 4 | 5 | 51 |
| N. of themes enacted | 14 | 13 | 19 | 4 | 5 | 27 |
| Av. time in min./theme | 7.2 | 7.0 | 10.5 | 10.0 | 7.8 | |
| Total time in min. of enactment | 101 | 91 | 200 | 40 | 39 | 471 |
| Housekeeping | 92 | 57 | 142 | 5 | 2 | 298 |
| Occupational | 9 | 11 | 37 | 5 | 17 | 79 |
| Vicarious | 0 | 23 | 21 | 30 | 20 | 94 |
| Percentage of total time enacted | | | | | | |
| Housekeeping | 91.1 | 62.6 | 71.0 | 12.5 | 25.1 | |
| Occupational | 8.9 | 12.1 | 18.5 | 12.5 | 43.6 | |
| Vicarious | 0.0 | 25.3 | 10.5 | 75.0 | 51.3 | |

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. The text notes that without reliable records, it is difficult to track progress, identify trends, and make informed decisions.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It mentions the use of surveys, interviews, and focus groups to gather qualitative information, as well as statistical analysis and data visualization techniques to process quantitative data. The importance of ensuring the reliability and validity of the data sources is also highlighted.

3. The third part of the document describes the process of interpreting the results and drawing conclusions. It stresses the need for a systematic approach to data analysis, starting with a clear understanding of the research objectives and hypotheses. The text also discusses the importance of considering potential biases and limitations in the data and the analysis process.

4. The fourth part of the document discusses the application of the findings to real-world situations. It emphasizes that the ultimate goal of the research is to provide actionable insights that can inform decision-making and drive positive change. The text also mentions the importance of communicating the results effectively to the relevant stakeholders and ensuring that the findings are used to inform policy and practice.

5. The fifth part of the document discusses the challenges and limitations of the research process. It acknowledges that there are many factors that can affect the quality and reliability of the data, such as sampling bias, measurement error, and data availability. The text also mentions the importance of being transparent about these limitations and discussing the implications for the conclusions drawn.

6. The sixth part of the document discusses the future directions of the research. It mentions the need for further studies to explore the relationships between the variables identified in the current study and to test the hypotheses in different contexts. The text also mentions the importance of continuing to refine the methods and tools used in the research process to improve the quality and reliability of the data.

7. The seventh part of the document discusses the ethical considerations of the research. It emphasizes the importance of obtaining informed consent from all participants and ensuring that the research is conducted in a way that respects their privacy and autonomy. The text also mentions the importance of being transparent about the funding sources and potential conflicts of interest.

8. The eighth part of the document discusses the conclusion of the study. It summarizes the main findings and the implications for practice and policy. The text also mentions the importance of continuing to monitor and evaluate the impact of the research findings and to make adjustments as needed.

9. The ninth part of the document discusses the acknowledgments. It thanks the individuals and organizations that provided support and assistance throughout the research process. The text also mentions the importance of recognizing the contributions of all those involved in the research.

10. The tenth part of the document discusses the references. It lists the sources of information used in the research, including books, articles, and other documents. The text also mentions the importance of providing accurate and complete references to ensure the credibility of the research.

The percentage of occupational play time tended to increase with age, from 8.9 at thirty-six through forty-one months to 43.6 at sixty through sixty-five months. Other percentages were 12.1 at forty-two through forty-seven months, 18.5, forty-eight through fifty-three, 12.5 at fifty-four through fifty-nine months.

The percentage of time devoted to the vicarious play theme showed some tendency to increase with the child's age. The percentages increased rather irregularly from 0 at thirty-six through forty-one months, 25.2 at forty-two through forty-seven months, 10.5 at forty-eight through fifty-three months to a high of 75.0 at fifty-four through fifty-nine months, and then dropped to 51.3 at sixty through sixty-five months.

Variety of Roles or Identifications and Personifications (Table 15)

The categories of roles and personifications--

(1) family members, (2) occupational workers, (3) fictitious personalities, (4) animals or live creatures, and (5) vehicles of transportation, were closely related to the housekeeping, occupational, and vicarious experience themes. Both roles and themes were often identified by the play objects which the children were using--stethoscope, doll buggy, milk carrier. If roles were not named by the children involved in the dramatization of the theme, they were identified by the observer and assigned to the designated general category.

There was no consistent difference in the total number of various roles played by subjects at various age levels. The average number of roles per eleven minute observation varied from 1.05 to 2.26 with no apparent trend.¹

When samples of observations totaling thirty-six minutes were taken, two of the five categories of roles occurred at the first interval (thirty-six through forty-one months) and at the third interval (forty-eight through fifty-three months). Three categories occurred at the other three levels. The data did not clearly indicate a trend.

The role categories, family members and occupational workers, occurred in each age range. The percentage of total roles devoted to playing a family member decreased steadily from 73.3 to 12.5 over the five age levels. The percentage devoted to playing occupational roles increased irregularly with the highest percentages at the forty-eight through fifty-three month, fifty-four through fifty-nine month, and sixty through sixty-five month levels. The categories of fictitious characters, animals and live

¹Observations were equated to provide for comparison of roles in the same manner as for comparison of themes and activities.

| | | | |
|--|---|---|---|
| $\frac{\text{Total number of roles in each level}}{\text{Total minutes of observation at each level}}$ | X | $\frac{\text{Longest average number of minutes of observation}}{\text{Number of roles in an eleven minute observation (e.g., at thirty-six through forty-one months interval--}} \\ \text{15 roles in an eleven minute observation)}$ | = |
| $\frac{15}{101}$ | | $X 11 = 1.64$ | |

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that this is crucial for ensuring transparency and accountability in the organization's operations.

2. The second part outlines the various methods and tools used to collect and analyze data. It mentions the use of surveys, interviews, and focus groups to gather information from different stakeholders.

3. The third part describes the process of identifying and addressing the needs and concerns of the community. It highlights the importance of listening to the voices of the people and working together to find solutions.

4. The fourth part discusses the role of the organization in promoting social justice and equality. It mentions the importance of advocating for the rights of marginalized groups and working to create a more inclusive society.

5. The fifth part describes the various programs and initiatives that the organization has implemented. It mentions the importance of evaluating the impact of these programs and making adjustments as needed.

6. The sixth part discusses the future goals and vision of the organization. It mentions the importance of staying focused on the mission and vision and working together to achieve them.

7. The seventh part describes the various ways in which the organization can be supported. It mentions the importance of fundraising, volunteering, and spreading the word about the organization's work.

8. The eighth part discusses the importance of maintaining strong relationships with the community and other organizations. It mentions the importance of communication and collaboration in achieving the organization's goals.

9. The ninth part describes the various challenges that the organization faces. It mentions the importance of staying resilient and finding creative solutions to these challenges.

10. The tenth part discusses the importance of staying up-to-date on the latest research and trends in the field. It mentions the importance of continuous learning and improvement.

creatures, and vehicles, each occurred once, at three different age levels. At the second level, forty-two through forty-seven months, 23.1 percent of the total roles were fictitious characters. At the fourth level, fifty-four through fifty-nine months, 40.0 percent of the roles were animals and live creatures. At the fifth level, sixty through sixty-five months, 50.0 percent of the roles were vehicles. When variety of categories at each level was examined there was no clear-cut trend since two categories occurred at the first and third levels and three categories occurred at the second, fourth, and fifth levels. The possibility of occurrence of greater variety of roles as age increases needs to be further investigated.

Sometimes a subject would name his own role in his conversation during play. "I'm the Lone Ranger, you be Zorro." "We're bombing mans." This direct identification of his own role occurred with greater frequency at the older age ranges than the younger. Only 18.9 percent of the roles of subjects in the thirty-six through forty-seven month age ranges were verbally identified while at the fifty-four through sixty-four age ranges the percentage was 53.8. This may indicate a growing self awareness of the role which the child is playing, as well as his increasing ability to use language.

TABLE 15
DISTRIBUTION IN FIVE AGE LEVELS OF VARIETY OF ROLES,
IDENTIFICATIONS, AND PERSONIFICATIONS

| Age: | 36-41 mo. | 42-47 mo. | 48-53 mo. | 54-59 mo. | 60-65 mo. | Totals |
|--------------------------------|-----------|-----------|-----------|-----------|-----------|--------|
| N. of children observed | 3 | 3 | 5 | 2 | 1 | 14 |
| N. of observations | 13 | 11 | 18 | 4 | 5 | 51 |
| Av. N. of roles/11 min. obs. # | 1.64 | 1.57 | 1.05 | 1.38 | 2.26 | |
| Total N. of roles played | 15 | 13 | 19 | 5 | 8 | 60 |
| Family members | 11 | 9 | 12 | 1 | 1 | 34 |
| Occupational workers | 4 | 1 | 7 | 2 | 3 | 17 |
| Fictitious personalities | | 3 | | | | 3 |
| Animals and live creatures | | | | 2 | | 2 |
| Vehicles | | | | | 4 | |
| Percent of total roles played | | | | | | |
| Family members | 73.3 | 69.2 | 63.2 | 20.0 | 12.5 | |
| Occupational workers | 26.7 | 7.7 | 36.8 | 40.0 | 37.5 | |
| Fictitious characters | | 23.1 | | | | |
| Animals and live creatures | | | | 40.0 | | |
| Vehicles | | | | | 50.0 | |

*See p. 81 footnote 1

Number of Children Involved
(Table 16)

Except at one age level, the average number of children involved in the dramatization of all categories of themes increased consistently as the age level increased. The average number of children enacting a theme increased as follows: 2.1 children at thirty-six through forty-one months; 1.5 children at forty-two through forty-seven months; 2.5 at forty-eight through fifty-three, and at fifty-four through fifty-nine months; and 3.2 children at sixty through sixty-five months. The range of number of children involved in the enactments of a theme remained similar at the various age levels.

When each category of themes was examined there was no apparent trend of development in the range and average number of children involved.

All children in the area of the enactment of a theme who neither were rejected by the subject nor overtly refused to play were considered as involved in the play. No attempt was made to differentiate between parallel and co-operative play. This may have been a factor in the lack of a more apparent trend in the increasing number of children involved in dramatization of a theme as age increased.

TABLE 16

DISTRIBUTION OF NUMBER OF CHILDREN
INVOLVED IN ENACTMENT OF THEMES

| Age: | 36-41 mo. | 42-47 mo. | 48-53 mo. | 54-59 mo. | 60-65 mo. | Totals |
|----------------------------------|-----------|-----------|-----------|-----------|-----------|--------|
| N. of themes observed | 14 | 13 | 19 | 4 | 5 | 27 |
| Range of N. of children involved | 0-4 | 0-5 | 0-6 | 1-4 | 1-4 | |
| Housekeeping | 1-4 | 0-5 | 0-4 | 4 | 1 | |
| Occupational | 0-2 | 1-4 | 0-6 | 1 | 3-4 | |
| Vicarious | - | 1-3 | 1-5 | 2-3 | 4 | |
| Av. N. of children involved | 2.1 | 1.5 | 2.5 | 2.5 | 3.2 | |
| Housekeeping | 2.8 | 1.6 | 2.3 | 4.0 | 1.0 | |
| Occupational | 1.0 | 2.5 | 2.8 | 1.0 | 3.5 | |
| Vicarious | - | 2.0 | 2.7 | 2.5 | 4.0 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 | 875 | 876 | 877 | 878 | 879 | 880 | 881 | 882 | 883 | 884 | 885 | 886 | 887 | 888 | 889 | 890 | 891 | 892 | 893 | 894 | 895 | 896 | 897 | 898 | 899 | 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 | 910 | 911 | 912 | 913 | 914 | 915 | 916 | 917 | 918 | 919 | 920 | 921 | 922 | 923 | 924 | 925 | 926 | 927 | 928 | 929 | 930 | 931 | 932 | 933 | 934 | 935 | 936 | 937 | 938 | 939 | 940 | 941 | 942 | 943 | 944 | 945 | 946 | 947 | 948 | 949 | 950 | 951 | 952 | 953 | 954 | 955 | 956 | 957 | 958 | 959 | 960 | 961 | 962 | 963 | 964 | 965 | 966 | 967 | 968 | 969 | 970 | 971 | 972 | 973 | 974 | 975 | 976 | 977 | 978 | 979 | 980 | 981 | 982 | 983 | 984 | 985 | 986 | 987 | 988 | 989 | 990 | 991 | 992 | 993 | 994 | 995 | 996 | 997 | 998 | 999 | 1000 | 1001 | 1002 | 1003 | 1004 | 1005 | 1006 | 1007 | 1008 | 1009 | 1010 | 1011 | 1012 | 1013 | 1014 | 1015 | 1016 | 1017 | 1018 | 1019 | 1020 | 1021 | 1022 | 1023 | 1024 | 1025 | 1026 | 1027 | 1028 | 1029 | 1030 | 1031 | 1032 | 1033 | 1034 | 1035 | 1036 | 1037 | 1038 | 1039 | 1040 | 1041 | 1042 | 1043 | 1044 | 1045 | 1046 | 1047 | 1048 | 1049 | 1050 | 1051 | 1052 | 1053 | 1054 | 1055 | 1056 | 1057 | 1058 | 1059 | 1060 | 1061 | 1062 | 1063 | 1064 | 1065 | 1066 | 1067 | 1068 | 1069 | 1070 | 1071 | 1072 | 1073 | 1074 | 1075 | 1076 | 1077 | 1078 | 1079 | 1080 | 1081 | 1082 | 1083 | 1084 | 1085 | 1086 | 1087 | 1088 | 1089 | 1090 | 1091 | 1092 | 1093 | 1094 | 1095 | 1096 | 1097 | 1098 | 1099 | 1100 | 1101 | 1102 | 1103 | 1104 | 1105 | 1106 | 1107 | 1108 | 1109 | 1110 | 1111 | 1112 | 1113 | 1114 | 1115 | 1116 | 1117 | 1118 | 1119 | 1120 | 1121 | 1122 | 1123 | 1124 | 1125 | 1126 | 1127 | 1128 | 1129 | 1130 | 1131 | 1132 | 1133 | 1134 | 1135 | 1136 | 1137 | 1138 | 1139 | 1140 | 1141 | 1142 | 1143 | 1144 | 1145 | 1146 | 1147 | 1148 | 1149 | 1150 | 1151 | 1152 | 1153 | 1154 | 1155 | 1156 | 1157 | 1158 | 1159 | 1160 | 1161 | 1162 | 1163 | 1164 | 1165 | 1166 | 1167 | 1168 | 1169 | 1170 | 1171 | 1172 | 1173 | 1174 | 1175 | 1176 | 1177 | 1178 | 1179 | 1180 | 1181 | 1182 | 1183 | 1184 | 1185 | 1186 | 1187 | 1188 | 1189 | 1190 | 1191 | 1192 | 1193 | 1194 | 1195 | 1196 | 1197 | 1198 | 1199 | 1200 | 1201 | 1202 | 1203 | 1204 | 1205 | 1206 | 1207 | 1208 | 1209 | 1210 | 1211 | 1212 | 1213 | 1214 | 1215 | 1216 | 1217 | 1218 | 1219 | 1220 | 1221 | 1222 | 1223 | 1224 | 1225 | 1226 | 1227 | 1228 | 1229 | 1230 | 1231 | 1232 | 1233 | 1234 | 1235 | 1236 | 1237 | 1238 | 1239 | 1240 | 1241 | 1242 | 1243 | 1244 | 1245 | 1246 | 1247 | 1248 | 1249 | 1250 | 1251 | 1252 | 1253 | 1254 | 1255 | 1256 | 1257 | 1258 | 1259 | 1260 | 1261 | 1262 | 1263 | 1264 | 1265 | 1266 | 1267 | 1268 | 1269 | 1270 | 1271 | 1272 | 1273 | 1274 | 1275 | 1276 | 1277 | 1278 | 1279 | 1280 | 1281 | 1282 | 1283 | 1284 | 1285 | 1286 | 1287 | 1288 | 1289 | 1290 | 1291 | 1292 | 1293 | 1294 | 1295 | 1296 | 1297 | 1298 | 1299 | 1300 | 1301 | 1302 | 1303 | 1304 | 1305 | 1306 | 1307 | 1308 | 1309 | 1310 | 1311 | 1312 | 1313 | 1314 | 1315 | 1316 | 1317 | 1318 | 1319 | 1320 | 1321 | 1322 | 1323 | 1324 | 1325 | 1326 | 1327 | 1328 | 1329 | 1330 | 1331 | 1332 | 1333 | 1334 | 1335 | 1336 | 1337 | 1338 | 1339 | 1340 | 1341 | 1342 | 1343 | 1344 | 1345 | 1346 | 1347 | 1348 | 1349 | 1350 | 1351 | 1352 | 1353 | 1354 | 1355 | 1356 | 1357 | 1358 | 1359 | 1360 | 1361 | 1362 | 1363 | 1364 | 1365 | 1366 | 1367 | 1368 | 1369 | 1370 | 1371 | 1372 | 1373 | 1374 | 1375 | 1376 | 1377 | 1378 | 1379 | 1380 | 1381 | 1382 | 1383 | 1384 | 1385 | 1386 | 1387 | 1388 | 1389 | 1390 | 1391 | 1392 | 1393 | 1394 | 1395 | 1396 | 1397 | 1398 | 1399 | 1400 | 1401 | 1402 | 1403 | 1404 | 1405 | 1406 | 1407 | 1408 | 1409 | 1410 | 1411 | 1412 | 1413 | 1414 | 1415 | 1416 | 1417 | 1418 | 1419 | 1420 | 1421 | 1422 | 1423 | 1424 | 1425 | 1426 | 1427 | 1428 | 1429 | 1430 | 1431 | 1432 | 1433 | 1434 | 1435 | 1436 | 1437 | 1438 | 1439 | 1440 | 1441 | 1442 | 1443 | 1444 | 1445 | 1446 | 1447 | 1448 | 1449 | 1450 | 1451 | 1452 | 1453 | 1454 | 1455 | 1456 | 1457 | 1458 | 1459 | 1460 | 1461 | 1462 | 1463 | 1464 | 1465 | 1466 | 1467 | 1468 | 1469 | 1470 | 1471 | 1472 | 1473 | 1474 | 1475 | 1476 | 1477 | 1478 | 1479 | 1480 | 1481 | 1482 | 1483 | 1484 | 1485 | 1486 | 1487 | 1488 | 1489 | 1490 | 1491 | 1492 | 1493 | 1494 | 1495 | 14 |
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CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

Summary and Conclusions

The primary purpose of this study was to develop and refine a modified time sampling technique for studying pre-school children's dramatic play. Subsequent use of this technique might obtain information which could be used to establish a normative standard of complexity of dramatic play of pre-school children.

That a need for such a normative standard existed had been stated by noted authorities. Erik H. Erikson¹ related the understanding of children and prevention of neuroses in children to an understanding of the "language of play." Hartley, Frank, and Goldenson² called dramatic play a "mirror of the child" and stated that there was a need for norms for such elements of dramatic play as complexity, emotional toning, type of role played, variations in situations, levels at which the child participated, and other children involved.

Components of complexity observed in this study were theme, activities, time of enactment, role, and other

¹Erikson, p. 561.

²Hartley, Frank, Goldenson, p. 16.

children involved. Observations of the subjects' dramatic play were recorded as time samples. The theme, defined as the core around which play was organized, was identified either by the role which the subject played or by the environmental setting or construction around which activity centered. Activities were recorded as specific actions which contributed to the enactment of a theme. The total time within the fifteen-minute observation during which the child was involved in dramatic play was recorded. The subject's role was sometimes named by the child himself in the play, but more often was assigned to general categories by the observer. Children in the play area who were neither excluded by the subject nor refused to play were considered as being involved in the dramatic play.

The seven subjects, three girls and four boys, in the three and four-year-old nursery school groups at Campus School, State University of New York, College of Education, at Buffalo, New York, represented a two and one-half year age span from three years to five and one-half years. These subjects were observed at approximately monthly intervals, during a six month period, for a total of 450 minutes, during fifty-one observations.

The modified time sampling technique developed in this study was productive in collecting information which described varied degrees of complexity of dramatic play, in all but one of the stated components of complexity; namely, variety of activities.

[illegible]

The theme was a logical basic unit of dramatic play which was easily observed, identified, and recorded, by the observer. The technique made it possible to observe that the choice of theme varied with the age level, housekeeping being the theme most often engaged in by the youngest children, less often at the second and third age levels, and least often at the two oldest age levels. Occupational themes and vicarious themes occupied a greater proportion of the dramatic play time among the older children than among the younger ones. However, it is likely that a sex factor also entered in since no girls were included in the two oldest age levels. When boys and girls were compared, the proportion of housekeeping themes decreased and occupational and vicarious themes increased with age of boys; whereas, for girls, proportion of housekeeping themes increased and occupational and vicarious themes decreased with age. Choice of theme in this study appeared to have been affected by the maturity of the child with the accompanying development of identification with like-sexed adults and their activities and with the widening environment of home and community including mass communication media of television, books, and movies.

Activities were observed and recorded in order to better determine the extent to which the theme was developed. Effort was then made to group activities into categories. However, the observer found it difficult to define an activity specifically enough to be consistent

in recognizing some types and categorizing them. Housekeeping activities were readily observed and identified because of their similarity to actual housekeeping activities. Occupational and vicarious experience activities were difficult to observe and identify because of a child's unrealistic concepts in these areas. Because of the difficulty in identifying an activity the modified time sampling technique was not entirely satisfactory in collecting data on activities. There was no apparent trend in the average number of activities per eleven minute observation of the dramatization of a theme. However, when the percentage of activities required to enact a theme was compared with the percentage of occurrence of the theme to total themes, the following trends were noted. Greater variety of housekeeping activities occurred at the younger age levels. Greater variety of vicarious activities occurred at the older age levels. Sex as well as age may have been a factor as there were no girl subjects at the higher age levels. The occupational theme was not well developed in terms of activities at any age level.

Through use of the technique it was observed and recorded that the time required for the enactment of an individual theme tended to increase with the maturity of the child. Percentage of total time spent in enactment of the housekeeping theme decreased as children matured, while percentage of total time spent in enactment of the occupational and vicarious themes increased as the child grew older.

The modified time sampling technique made it possible to collect data which showed that the child's roles and personifications were closely related to the theme of the play. The role of family members occurred at each level with the percentage of total roles devoted to family members decreasing as the age increased. Other categories of roles increased as age increased. There was an increased incidence of a subject's verbally naming his role in the play with increased maturity of the child, possibly indicating a developing awareness of the role which he was playing, as well as increased language development. A comparison of the variety of roles at the various levels showed no trend consistent with age.

Through use of the technique it was observed that the number of children involved in the enactment of a theme tended to increase with the maturity of the child.

On the basis of use of this modified time sampling technique in observing the seven subjects at intervals for six months and recording dramatic play information, the observer concluded that the technique was productive in collecting data concerning varying degrees of complexity of dramatic play in terms of theme, time of enactment, role, and number of children involved. It was not as productive in collecting data concerning the activities component of complexity.

Limitations of this Study

This study was planned for ten subjects to represent five age levels from three years to five and one-half years old. There should have been one boy and one girl matched for age representative of each level. Due to the composition of the two nursery school groups being observed and extended absences of three subjects, seven children remained in the completed study with only boys representing the four and one-half through five and one-half age levels. Consequently some of the trends found may have been due to sex differences rather than age, or maturity, levels.

A limitation of this study of a technique for studying complexity of dramatic play was the irregular intervals between observations. Observations were to have been made at regular intervals for the six month period of each level of development. Absences of children and demands made upon the teacher-observer made the intervals of observation irregular. This limited the use of the technique.

Within individual observations there was inconsistency in the length of observation. The study plan provided for termination of an observation when a child ceased his dramatic play or at the end of fifteen minutes of dramatic play. At other times observations were necessarily terminated by the end of free play period, mistaken interference by college students, or by conflicting

responsibilities of the teacher-observer.

Analysis of activities was complicated by the problem of identifying some types and the necessity of re-defining an activity as the study progressed.

Limitations of number of subjects and observations were fully anticipated when the study was devised, but since the purpose of the study was the development of a technique rather than the actual establishment of normative standards this limitation was not felt to be detrimental to the success of the study. Additional limitations, produced by the inconsistency of time intervals of observation and lengths of individual observations, were not desirable.

Although the study was devised to be carried out by an independent observer, it became necessary for the researcher to assume responsibilities of teacher and observer. In spite of the complications involved in such a procedure it is perhaps a more realistic method in present day research involving school children than is the research team. Because it is probable that more research could be carried on with young children if the teacher could use the technique with her own classes, many of the following recommendations would be usable by the classroom teacher.

Recommendations for Further Study

It is recommended that a greater number of subjects, equal numbers of boys and girls, matched for age,

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representative of each age level, be selected.

Due to children's absences and varying demands on teacher's time it was difficult to maintain equal intervals between observations during the six month period of a single subject. A cross-sectional selection of subjects would minimize this limitation. Therefore, the researcher recommends that the sex and age of the child being observed be recorded for each observation and that records of numerous children be accumulated over a period of time. In this way equal numbers of records of boys and girls of each level could be selected and arranged in order of age, without the necessity of maintaining a rigid schedule of observation of the original subjects over the six month span. Although the cross-sectional approach would be more feasible in a classroom situation, there are advantages to the longitudinal approach. If a number of boys and girls could be studied over the two and one-half year span it would provide a more developmental view of children's dramatic play.

If the modified time sampling method is to be used, the fifteen minute length should be maintained. Any single observation which is terminated within the fifteen minute period by any cause other than the subject's concluding dramatic play should be discarded. This would provide greater consistency of the time factor and make comparison of records more reliable.

Because the dramatization of some themes was not completed within the fifteen minute time sample, a preferable method for collecting data might be event sampling. Event sampling singles out naturally segregated behavioral events of one or another class and records these events as they arise and unfold.¹ In this study the theme was seen to be the core around which dramatic play developed. Therefore, the theme would be the event, and the length of the observation would depend upon the occurrence of, and the length of, the theme enacted. This would provide greater information concerning the development of length of time to enact a theme as a child's maturity increased.

The researcher recommends that the definitions as presented in the Manual of Directions,² be maintained. These include definitions of the components of complexity of dramatic play--theme, activities, time of enactment, roles and personifications, and other children involved.

Additional effort needs to be made to identify, to collect data on, and to categorize, activities for subsequent analysis. Because housekeeping was further developed and more realistically portrayed by three to five year old children, it was possible to identify housekeeping activities and categorize them. Young children's dramatizations of occupations and vicarious experiences

¹Paul H. Mussen (ed.), Handbook of Research Methods in Child Development (New York: John Wiley & Sons, Inc., 1960), p. 75.

²Manual of Directions, Appendix.

were less developed and less realistic, making it difficult to identify activities and impossible to categorize them. The researcher suggests that this technique be tried with older children whose dramatizations of occupational and vicarious experience themes might be more fully developed and realistic. This might provide greater information which could be used to develop categories of activities in the occupational and vicarious experience theme. Then time sampling or event sampling might be used with pre-school children with greater success in collecting information concerning the activity component of complexity.

In this study, it appeared that various themes developed in complexity at varying rates. The housekeeping theme became quite complex by the third level (forty-eight through fifty-three months) while the vicarious experience theme was only beginning to develop at the third level. Therefore, analysis of complexity of dramatic play might be made in terms of separate themes rather than in terms of a composite of the three themes at specific age levels.

When a satisfactory number of observations of boys and girls, matched for age, representative of each age level, has been accumulated, appropriate tests of statistical significance should be made. With this information it would then be possible to establish the normative standard of complexity of dramatic play of nursery school children in terms of theme, activities, time of enactment, role, and number of children involved.

APPENDIX A

Plan of Study and Rating Sheet as Submitted to Judges

39 Abbot Hall
Michigan State University
East Lansing, Michigan

April 11, 1957

Mrs. Mary R. Haworth
Psychology Department
Michigan State University
East Lansing, Michigan

Dear Mrs. Haworth:

I am planning my thesis outline for subsequent research in the area of dramatic play of preschool children. At present I have constructed hypotheses concerning five measurable factors which I believe indicate the complexity of dramatic play. If these factors are measurements of complexity they might be used as part of a technique for establishing a normative standard of dramatic play of nursery school children.

In order to test their validity as measures of complexity I am submitting my initial outline to five judges who I feel are qualified because of their interest and experience with young children. I would appreciate your judgments of the validity of each factor. The following is an outline of the purpose, hypotheses, and procedure of the research, and the rating sheet which I hope you will return by April 18.

Thank you for your time and consideration.

Sincerely yours

Lu Anne Thompson

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THESIS OUTLINE

Title: A Technique for Establishing a Normative Standard of Dramatic Play of Nursery School Children*

Purpose: It is felt that there is a lack of study of the dramatic play of preschool age children. There is no established normative standard of dramatic play for use in appraising children's behavior. The importance of this lack is made clear by Erikson's statement that, "If we can establish the language of play with its various cultural and age dialects we may be able to approach the problem of why it is that certain children live undamaged through what seem to be neurotic episodes and how early, neurotic children have indicated that they have reached a deadlock." Normative frameworks help to establish this "language of play." Extensive norms have been organized for the constructive activities of play such as block building, and easel painting, but not for the imaginative or dramatic play activities.

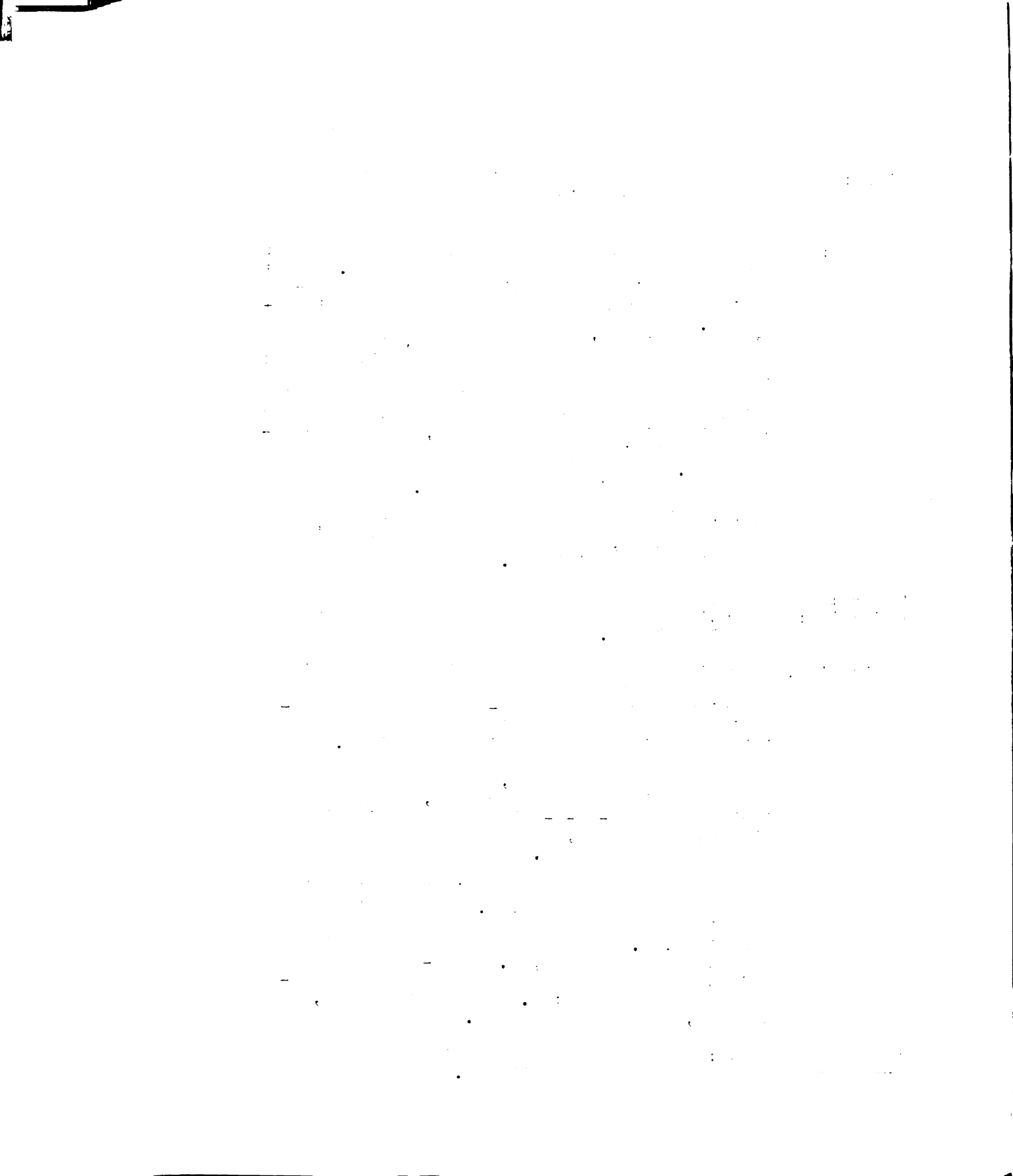
General Objective: To develop a technique for establishing a normative standard of dramatic play of nursery school children.

Definition: Dramatic play is defined as all instances in which the child through language or overt behavior dramatizes or re-enacts personal experiences in real life situations or fantasy interpretations of real life situations.

It implies dramatization, construction or representation in dramatic form, which may include playing-at-a-role or identification with other persons, and personification of objects and materials.

This excludes the following isolated instances of imaginative behavior: 1. Construction activities involving merely the use of raw materials; 2. Conventional games of social imitation or learning; 3. Make-believe use of objects which consist of only renaming or re-identifying objects; 4. Spoken fantasies, teasing, and nonsense words.

*Later changed to: A Technique for Assessing Complexity of Dramatic Play of Nursery School Children.



Hypotheses: It is hypothesized that the five specific factors to be observed and recorded are indicative of the complexity of dramatic play and therefore can be assumed to show increase in complexity as related to chronological age levels.

1. Variety of themes: Although the type or kind of theme would vary with individual backgrounds, it is felt that the variety of themes would be an indication of complexity of dramatic play. The total number of various themes at a given developmental level would increase with chronological age. The time required for the enactment of an individual theme would increase with chronological age also.

2. Variety of roles or identifications and personifications: In like manner, the kind of role would vary with the individual but the number of various roles and personifications would increase with chronological age.

3. Variety of activities: The number of activities within a theme would increase with chronological age.

4. Uses of language: M. S. Fisher in her study, "Language Patterns of Preschool Children," found many criteria which show developmental patterns in the child's gaining of linguistic control. The following criteria have been selected because of their relation to the child's dramatic play and the ease with which they may be observed and recorded.

- a. Remarks made about other people increase with age up to the fifth year and then remain constant.
Remarks about objects decrease as age advances up to the fourth year and then remain constant.
- b. Commands increase rapidly with age, arriving at a peak at the end of the fourth year.
- c. The use of the first personal pronoun in the plural (we, our, us) increases with age.

5. Number of children involved: The number of children involved in the enactment of a

1. The first of these is the fact that the
the government has been unable to
the people of the country.

2. The second is the fact that the
the government has been unable to
the people of the country.

3. The third is the fact that the
the government has been unable to
the people of the country.

4. The fourth is the fact that the
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the government has been unable to
the people of the country.

6. The sixth is the fact that the
the government has been unable to
the people of the country.

7. The seventh is the fact that the
the government has been unable to
the people of the country.

theme will increase with chronological age.

Procedure: Subjects: Observations will be made of ten children, two representing each of five, six month levels, from three years to five years and six months.

Observations: There will be four, fifteen-minute observations of dramatic play, two to include language and two to include activities, within a one week period for each of the ten children.

EXAMPLES OF OBSERVATIONS AND ANALYSIS

Observation and analysis including language

Jane: 4 years, 2 months

Theme: telephone conversation

Time: 2 minutes

Number of children and roles: Joanne, member of a family
 Alice, member of a family
 Jane, member of a family

Uses of language:

- a. Remarks about other people 2,5 Incomplete
- b. Commands 1
- c. Use of we, our, us 0

I'll git the clock and see what time it is

Dials telephone

What time is it? object

One to forty (it) object, Incomplete

Hey, I'm going down the basement

Hello other people, Incomplete

Yes other people, Inc.

Goodbye other people, Inc.

I said what time is it?

I said what time is it?

It's one to forty object

Hello other people Inc.

What do you want now? other people

I'll shoot you

Yes other people, Inc.

I said...

That wasn't the right time it was object

Six o'clock you silly man (it) object, Inc.

Now listen man (you) other people, Command

If you say it the wrong time I'll kill you

Hangs up receiver

Observation and analysis including activities

Joanne: 4 years, 6 months

Theme: moving to California

Time: 2 minutes

Number of children and roles: Joanne, mother
 Nancy, big sister
 Alice, big sister
 Jane, sister

Variety of activities:

"I'm goin' to California"
Puts on shirt

Slips into dress
Steps into high heels

| | |
|------------------------|---|
| <u>Closes box</u> | <u>Pushes bed "going to California"</u> |
| <u>Sits on it</u> | <u>Puts purse over shoulder</u> |
| <u>Stands up</u> | <u>Takes off dress</u> |
| <u>Takes off shirt</u> | <u>Throws rug and white shirt over screen</u> |
| | <u>Pushes bed over to "California"</u> |

RATING SHEET

Please judge the validity of each factor according to the following rating scale--4-5 being a judgment of excellent validity, 3-4 good validity, 2-3 average validity, 1-2 fair validity, 0-1 poor validity. You may check any position on the continuum. Example: 5 4 x 3 2 1 0 would be a rating of 3.5, good.

If you feel that one or more of the factors is/are poor measurement(s) I would appreciate a brief explanation and suggestions for possible changes which might improve its validity. Any additional comments which you feel might be beneficial would be welcome. I hope you will find it possible to return the rating sheet to me by April 17.

Variety of themes 5 4 3 2 1 0

Variety of roles or
identifications and..... 5 4 3 2 1 0
personifications

Variety of activities..... 5 4 3 2 1 0

Uses of language..... 5 4 3 2 1 0

Number of children
involved..... 5 4 3 2 1 0

Comments: (you may use other side if you wish)

Lu Anne Thompson
39 Abbot Hall
Michigan State University
East Lansing, Michigan

1. The first part of the document is a list of the names of the persons who were present at the meeting.

2. The second part of the document is a list of the names of the persons who were absent from the meeting.

3. The third part of the document is a list of the names of the persons who were present at the meeting.

4. The fourth part of the document is a list of the names of the persons who were absent from the meeting.

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16. The sixteenth part of the document is a list of the names of the persons who were absent from the meeting.

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21. The twenty-first part of the document is a list of the names of the persons who were present at the meeting.

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23. The twenty-third part of the document is a list of the names of the persons who were present at the meeting.

24. The twenty-fourth part of the document is a list of the names of the persons who were absent from the meeting.

25. The twenty-fifth part of the document is a list of the names of the persons who were present at the meeting.

APPENDIX B
Manual of Directions

OBSERVATION MANUAL

I. Definitions of terms

- A. Dramatic play.--Dramatic play is defined as all instances in which the child, through overt behavior, dramatized or enacted personal experiences from real life situations, or fantasy interpretations of real life situations.

It implies dramatization, construction or representation in dramatic form, which might include playing-at-a-role or identification with other persons, and personification of objects and materials.

This excludes the following instances of imaginative behavior: (1) construction activities involving merely the use of raw materials; e.g., making a duck out of clay or a train out of tinkertoys without then using them in play, (2) conventional games of social imitation or learning, e.g., playing Farmer in the Dell, (3) make-believe use of objects which consists of only renaming or re-identifying objects, e.g., calling a block a baby, (4) spoken fantasies, teasing, and nonsense words, without action, e.g., saying, "I dreamed I was a fireman and..." The above expressions of imagination--simple constructions,

• *Journal of the American Medical Association*, 2000; 284: 1361-1366

conventional, imitative games, and "pretend" verbalizations--are excluded because of their simplicity and lack of development into a dramatic activity in which the child himself becomes involved.

- B. Theme.--The theme is defined as the core around which the play is organized. Examples: housekeeping, doctor play, fireman play.
- C. Playing-at-a-role or identification.--Playing-at-a-role and identification are used synonymously. Playing-at-a-role is defined as the enactment of a role as a form of pretense. This identification is usually with a person who is not present. Example: conversation in houseplay. "I'm mother; you be the big sister."
- D. Personification.--Personification is the attribution of personal nature or characteristics to inanimate objects or abstract notions. Therefore, personification generally needs an object which is being personified. Example: A boy, seeing toy soldiers floating in a tub of water, cries, "They say, 'Help'!" He is personifying the inanimate soldiers.
- E. Children involved.--All children in the immediate social situation in which the enactment of the theme is in progress, who do not refuse to participate, and are not excluded from the participation

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. The text suggests that organizations should implement robust systems to track every detail, from small expenses to major investments.

2. The second section addresses the challenges of data management in a rapidly changing environment. It notes that as the volume of data increases, the complexity of managing it also grows. The author argues that organizations must invest in advanced technologies and skilled personnel to effectively handle this information. This includes not only storage but also the ability to analyze and interpret the data for strategic decision-making.

3. The third part of the document focuses on the role of communication in organizational success. It states that clear and consistent communication is vital for ensuring that all team members are aligned with the organization's goals and vision. The text advocates for regular meetings, open lines of communication, and the use of various channels to disseminate information. It also highlights the importance of listening to feedback from employees and stakeholders.

4. The fourth section discusses the importance of innovation and creativity in driving growth. It suggests that organizations should foster a culture where new ideas are encouraged and rewarded. This can be achieved by providing opportunities for employees to experiment, take risks, and learn from failures. The text also mentions the need for continuous learning and development to keep the organization at the forefront of its industry.

5. The final part of the document concludes by summarizing the key points discussed. It reiterates that success is built on a foundation of accurate records, effective data management, clear communication, and a commitment to innovation. The author encourages organizations to regularly review and refine their processes to ensure they remain competitive and resilient in the face of future challenges.

by the subject being observed, are considered involved in the dramatic play. A child's overt behavior may or may not indicate his involvement.

II. Biographical data of subject

- A. Name of child
- B. Sex of child
- C. Birth date of child
- D. Siblings and ordinal position
- E. Intelligence (if it is possible to have child tested)
- F. Socio-economic status of family as determined by Cattell's Metric Scale of Social Status, 1946.
- G. Pertinent information which might affect child's dramatic play
 - 1. Physical capacities
 - 2. Length of time in Nursery School group

III. Recording of information during observation

- A. Necessary environment for observation
 - 1. Free play situation
 - 2. A minimum of 5-6 children as potential participants
 - 3. Minimal adult interference
- B. General preliminary information
 - 1. Name and age of child under direct observation
 - 2. Date
 - 3. Significant supplementary items--to be related by teacher

- a. Change in regular routine, schedule
 - b. Emotional upsets
 - c. Play in progress
- 4. Brief notation of area of play and names of playmates in area
- 5. Time when child being observed becomes involved in dramatic play

At times play may be in progress at beginning of observation
- C. Recording dramatic play in diary form
 - 1. Factors of complexity
 - a. Theme.--Record each individual theme within the fifteen minute period
 - b. Activities within a theme
 - (1) Record each activity which contributes to the theme during the fifteen minute observation
 - (2) Repetition of an activity or continuation of the same activity using different materials is recorded as one activity. Example: A girl pours water from pitcher to cups, from cups to dish. She then wipes off the table and returns to pouring. There are two activities, pouring and wiping the table.

- (3) The meaning of children's dramatic play is not usually something which they willingly share with adults. Many of their seemingly meaningless activities may contribute significantly to their development of the theme of play, although the adult observer does not recognize the contribution. To avoid arbitrary analysis, only those activities which were easily recognized by the observer as contributing to the theme were recorded. The child's conversation often clarified his actions. Example: A child's spooning of water from a bowl and a pitcher into his cup might look like repetition of one activity until he accompanied his actions by, "A little sugar and now some cream for my coffee." Then his activities could rightfully be counted as two activities.
- (4) It cannot be denied that language plays an important role in children's dramatic play. Although the scope of this research has not included content of language as one of the factors of complexity, it is believed that certain

functions of language could be included as activities. Example: Greeting, scolding the baby, talking on the telephone, and making noises for guns and machinery.

- c. Time required for the enactment of a theme
 - (1) Record the time of the beginning and end of each individual theme.
 - (2) Record time at five minute intervals within the fifteen minute period.
 - (3) Cease observation at the end of fifteen minute period or before if child changes to another type of play activity. Example: Observation is ceased when child, who has been playing fireman on the ladder, suddenly runs to the art area to paint at the easel. If he returns to dramatic play, continue observation until total of fifteen minutes of dramatic play has been recorded.
 - (4) Note cause for cessation of observation, if fifteen minute period has not been completed.
- d. Playing-at-a-role or identification and personification.--Record the role of the child under direct observation. If the

1. The first part of the report is a general introduction to the subject of the study. It discusses the importance of the study and the objectives of the research.

2. The second part of the report is a detailed description of the methodology used in the study. It includes information about the sample size, the data collection methods, and the statistical analysis techniques.

3. The third part of the report is a presentation of the results of the study. It includes tables and graphs showing the data and the findings of the research.

4. The fourth part of the report is a discussion of the results and their implications. It includes a comparison of the findings with previous research and a discussion of the limitations of the study.

5. The fifth part of the report is a conclusion and a summary of the findings. It includes a final statement about the results of the study and a recommendation for further research.

6. The sixth part of the report is a list of references. It includes a list of all the sources used in the study, including books, articles, and other documents.

7. The seventh part of the report is an appendix. It includes any additional information that is relevant to the study, such as raw data, questionnaires, and other documents.

8. The eighth part of the report is a glossary. It includes a list of all the terms used in the study and their definitions.

9. The ninth part of the report is a list of figures. It includes a list of all the figures used in the study and their descriptions.

10. The tenth part of the report is a list of tables. It includes a list of all the tables used in the study and their descriptions.

11. The eleventh part of the report is a list of abbreviations. It includes a list of all the abbreviations used in the study and their full names.

specific role is not designated by the children in play it will be necessary to assign him a more general role, such as family member, instead of father or baby.

- e. Children involved.--Record names of children participating in dramatic play with child under direct observation.

2. Additional explanatory information

- a. Language which explains the purpose of the activity in progress, or the role being played, should be noted.
- b. Notation such as "continues pouring and serving tea" should be made when necessary to explain unusual lapses of time.
- c. Miscellaneous information which is pertinent to observation and analysis should be recorded.

IV. Analysis of diary record

A. Theme

- 1. Identify themes by role, e.g., Zorro, Mother, which subject in playing; or by the specific environmental setting or construction, e.g., hollow block zoo, rocking boat, doll house, around which activity centered.
- 2. Name themes according to classification
 - a. Housekeeping, e.g., caring for baby, cooking



- b. Occupational play, e.g., building a house,
delivering milk, driving a bus
- c. Vicarious experiences, e.g., chasing ghosts,
flying like Superman

3. Write name in left hand margin of diary record,
opposite onset of its occurrence.

B. Activities within a theme

1. Underline verb and object, if there is one, to
designate activity. Sitting, standing, running,
etc., shall generally be considered as an
integral part of the activity it accompanies
and shall not be underlined, except in such
cases as it is clearly a separate activity.
Example: If a child runs across the room, pulls
out a chair and sits down to drink tea, during
houseplay, only drinking tea is underlined. If
a child is a lion and crawls slowly about from
child to child, roaring, both crawling and roar-
ing are underlined.

2. Group activities into sub-themes when possible

a. Housekeeping sub-themes

- (1) Laundry--sort, wash, iron, fold, and
put away clothes
- (2) Washing dishes--stacking, preparing
dishwater, washing, wiping, putting
dishes away
- (3) Cooking--getting out equipment, mixing,

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stirring, baking, cooking, storing or serving food

- (4) Cleaning (care of house)--getting out equipment, sweeping, washing, mopping, moving furniture, straightening or putting away, repairing
- (5) Child care--dressing, putting to bed, feeding baby
- (6) Social interaction--going for walk, shopping, telephoning
- (7) Care of person--dressing up, washing hands, sleeping, eating

b. Occupational activities not categorized

c. Vicarious experience activities not categorized

- 3. Bracket activities of same sub-theme and label in left hand margin. When there is doubt as to classification of a single activity, it is counted as an activity of the sub-theme in which the majority of activities occurs.

Example: A single activity of washing hands might be included as "personal" if it is part of getting ready to go for a walk, or as "dish-washing" if it occurs while the subject is washing and drying dishes.

- C. Time required for enactment of a theme.--Write number of minutes per theme and total number of

minutes of observation in left hand margin.

D. Roles or identifications, and personifications

1. Name roles according to classification.

- a. Family members, e.g., mother, sister, father, baby
- b. Occupational workers, e.g., milkman, fireman, cowboy
- c. Fictitious personalities, e.g., Zorro, ghosts
- d. Animals or live creatures, e.g., lion, elephant, snake
- e. Vehicles of transportation, e.g., boats, snowplows, trains

2. Write name of classification in left hand margin opposite initial enactment of this role.

3. If specific role has been named by child, include it in parentheses.

E. Children involved.--Write number of children involved in left hand margin.

V. Example of diary record and analysis

Observation

SANDY

December 9, Monday, 13 minutes, 11 activities

Sandy is playing with Missy. They are playing with housekeeping equipment in front of the piano. Play is in progress.

9:33 Dances around room carrying 2 hats and bandaid box

Personal-1 Sleeps on steps of rocking coat--much giggling with Missy

("Let's go to sleep")

("Let's go to the house")

Runs to doll corner

Adjusts doll on chair

Picks doll up and runs off to piano carrying it

Spanks doll

Hands doll to Missy to be spanked

("You spank her.")

("She has to go to bed")

Starts to put doll on chair but walks about with doll, instead

Child
Cave-5

Puts doll on piano bench and giggles with Missy as Missy telephones the doctor

("Tell him the baby is sick!")

("Did you ask him?" as Missy hangs up)

Picks doll up and runs to doll corner, taking doll to doctor (Debbie)

Hands doll to Debbie

("You be the doctor okay? Baby is sick.")

Runs back to steps

(Short interruption of play to talk to Stuart but Missy tells Stuart to go away--"This is a meeting.")

9:38 Picks up hat and puts it on head
 Personal - 1
Dials telephone
 Social - 3 { Picks up receiver
Hangs up as Missy says her arm is sick

Personal - 1 Sandy lies down on step, sick
 (Missy calls doctor)
 Runs to doll corner with Missy and then back to steps
 Lies down
 (Talks with Stuart and argues, wants him to leave)
 (Interruption as she plays "peek" behind cupboard, with Jackie)
 (Missy says, "We both have a cold")

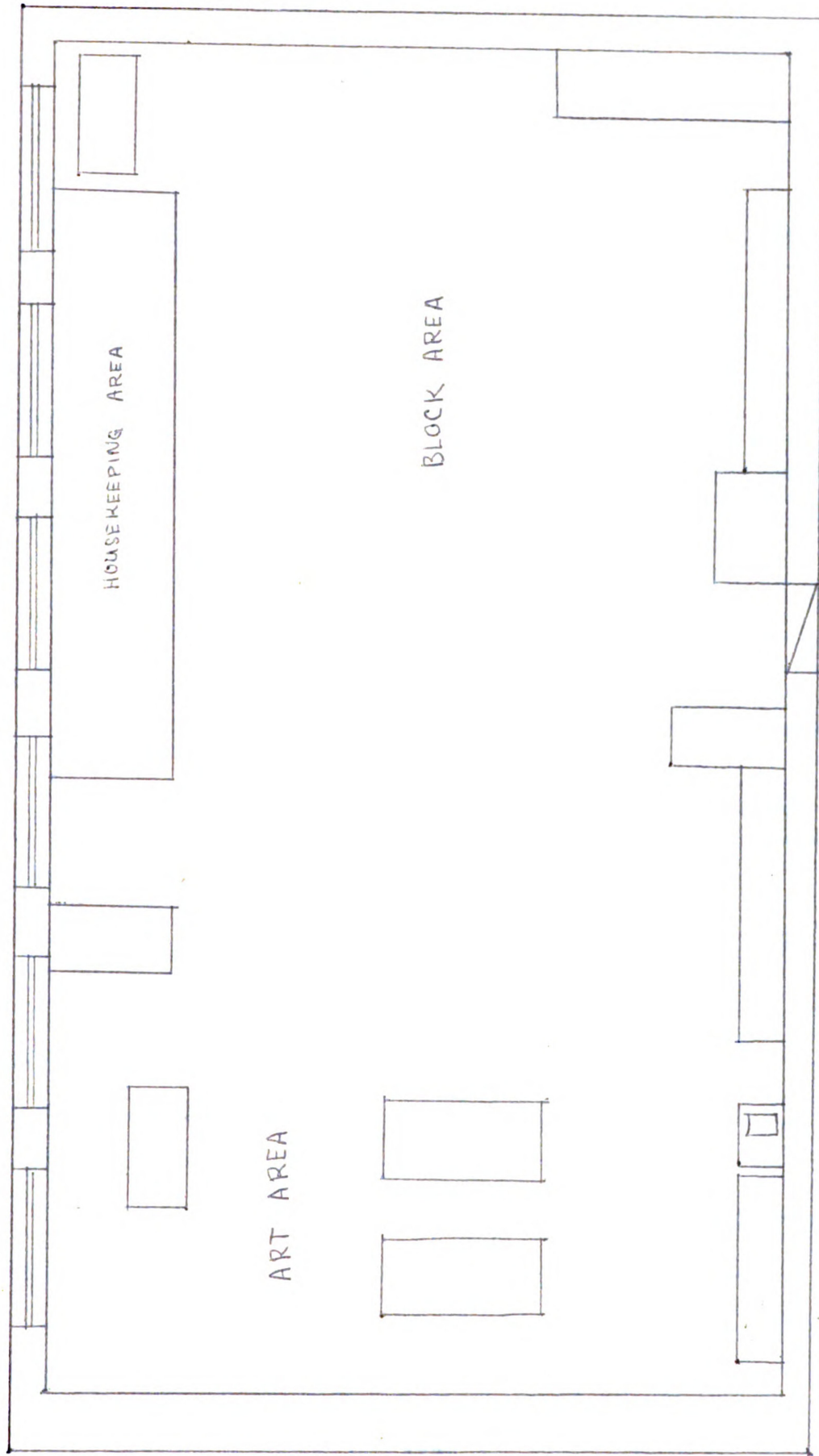
9:43 (Takes phone from Jackie and says, "Missy, you be the doctor")
 Telephones doctor from behind end of piano
 ("You be the doctor and I'll be laying down")
 (Ricky joins carrying the stethoscope and examines Sandy)

9:46 Play ended by announcement of clean-up time.

| | | | |
|--------------|--|-----------------------|------------------------------------|
| <u>Theme</u> | Housekeeping
11 Act.
13 Min. | <u>Role</u> | Family member
(mother, patient) |
| | Personal - 3
Child Care - 5
Social - 3 | <u>Other children</u> | 3
(Ricky, Missy, Debbie) |

APPENDIX C

Floor Plan of Nursery School Room



PLAYROOM 24' x 44'

APPENDIX D
Schedules of Activities

CAMPUS SCHOOL
STATE UNIVERSITY OF NEW YORK
COLLEGE FOR TEACHERS
BUFFALO

Three Year Old Nursery School, First Semester 1957

SCHEDULE OF ACTIVITIES
(beginning September 19)

8:45-9:00 Arrival, inspection

9:00-9:35 Free play (in various areas)

Blocks, Doll House, Sand, Art, Music, Books

9:35-9:50 Clean up and preparation for group activity

Clean up play areas
Toileting and wash hands
Gather in group as ready

9:50-10:00 Group activity

Music activity (Singing, rhythms, records,
etc.)

and/or

Special activity (Puppet play, science
activity, group game)

10:00-10:15 Juice and cookies

10:15-10:30 Quiet period (While children rest on rugs)

Rest
Story

10:30-10:35 Dress for outdoors

10:35-11:00 Outdoor play (Weather permitting)

11:00-11:10 Departure (Leave from playground)

This may be considered a framework for activity and
therefore is subject to change within the program.

Parents are invited to observe from the observation
room at any time.

Please observe arrival and departure times.

APPENDIX E

Chart of Intervals of Observation

| Months | Sally
11/10/54 | Jim
10/22/54 | Sandy
6/22/54 | Mary
9/12/53 |
|------------------------|-------------------|-----------------|------------------|-----------------|
| 36 | 12/2 - 8 min | | | |
| (3 Yrs.) | 12/5 -10 min | | | |
| 37 | 1/8 - 8 min | 12/5 - 2 min | | |
| | | 12/6 - 5 min | | |
| 38 | 1/29 - 7 min | 1/10- 5 min | | |
| 39 | 2/26 - 7 min | 1/31- 8 min | | |
| | 2/7 -12 min | | | |
| 40 | | 3/4 - 6 min | | |
| | | 3/7 -11 min | | |
| 41 | | | 12/9 -13 min | |
| 42 | 5/23- 5 min | 4/23- 7 min | | |
| (3 $\frac{1}{2}$ Yrs.) | 5/28-11 min | | | |
| 43 | | 5/28-10 min | 1/30-12 min | |
| | | | 2/5 - 3 min | |
| 44 | | | 2/25-10 min | |
| | | | 2/26- 5 min | |
| 45 | | | | |
| 46 | | | 5/5 -15 min | |
| 47 | 10/20-13 min | | | |
| 48 | 11/24- 9 min | 10/30- 7 min | | |
| | | 11/5 - 6 min | | |
| | | 11/20-15 min | | |
| 49 | 12/17-15 min | 12/17- 2 min | | |
| | 1/8 -15 min | | | |
| 50 | 1/19-15 min | 1/19-15 min | | 12/5 -15 min |
| | | | | 12/9 -15 min |
| 51 | | | 10/21-10 min | 1/10- 5 min |
| 52 | | | | |
| 53 | | | | 3/3 -15 min |
| 54 | | | | |
| 55 | | | | |
| 56 | | | | |
| 57 | | | | |
| 58 | | | | |
| 59 | | | | |
| 60 | | | | |
| 61 | | | | |
| 62 | | | | |
| 63 | | | | |
| 64 | | | | |

| Months | Bruce
8/23/53 | Jon
5/14/53 | Paul
12/16/52 |
|----------|------------------|----------------|------------------|
| 36 | | | |
| (3 Yrs.) | | | |
| 37 | | | |
| 38 | | | |
| 39 | | | |
| 40 | | | |
| 41 | | | |
| 42 | | | |
| 43 | | | |
| 44 | | | |
| 45 | | | |
| 46 | | | |
| 47 | | | |
| 48 | | | |
| (4 Yrs.) | | | |
| 49 | | | |
| 50 | | | |
| 51 | 12/4 -10 min | | |
| 52 | 2/21- 6 min | | |
| 53 | 2/27-15 min | | |
| 54 | 3/3 - 5 min | 12/9 -15 min | |
| 55 | | | |
| 56 | 5/21- 5 min | | |
| 57 | | | |
| 58 | | | |
| 59 | | 5/7 -15 min | |
| 60 | | | |
| (5 Yrs.) | | | 1/10 - 10min |
| 61 | | | |
| 62 | | | 2/26 - 5 min |
| 63 | | | |
| 64 | | | |
| | | | 4/19-15 min |
| | | | 4/28- 2 min |
| | | | 4/29- 5 min |

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• The first step in the process of creating a new product is to identify a market need. This involves conducting market research to determine what consumers want and what problems they are trying to solve. Once a need is identified, the next step is to develop a concept for a product that addresses that need.

• The second step is to create a prototype of the product. This allows the designer to test the product's functionality and make any necessary adjustments. Prototyping can be done in a variety of ways, from simple sketches and models to more complex 3D printed or CNC machined parts. The goal is to create a tangible representation of the product that can be used to gather feedback and refine the design.

• The third step is to conduct a feasibility study. This involves evaluating the technical, financial, and market viability of the product. Technical feasibility assesses whether the product can be built with current technology. Financial feasibility evaluates the costs of production and the potential for profitability. Market feasibility determines if there is a sufficient market for the product.

• The fourth step is to develop a business plan. This document outlines the company's goals, strategies, and financial projections. It is a critical tool for securing funding and guiding the company's operations.

• The fifth step is to secure funding. This can be done through a variety of means, including venture capital, angel investors, crowdfunding, or traditional bank loans. Each option has its own requirements and risks, so it's important to carefully evaluate the options and choose the one that best fits the company's needs.

• The sixth step is to manufacture the product. This involves setting up a production line, sourcing materials, and hiring workers. Manufacturing can be a complex and costly process, so it's important to have a solid plan in place before starting.

• The seventh step is to launch the product. This involves marketing the product, distributing it, and providing customer support. Launching a new product is a major undertaking, so it's important to have a comprehensive marketing and distribution strategy in place.

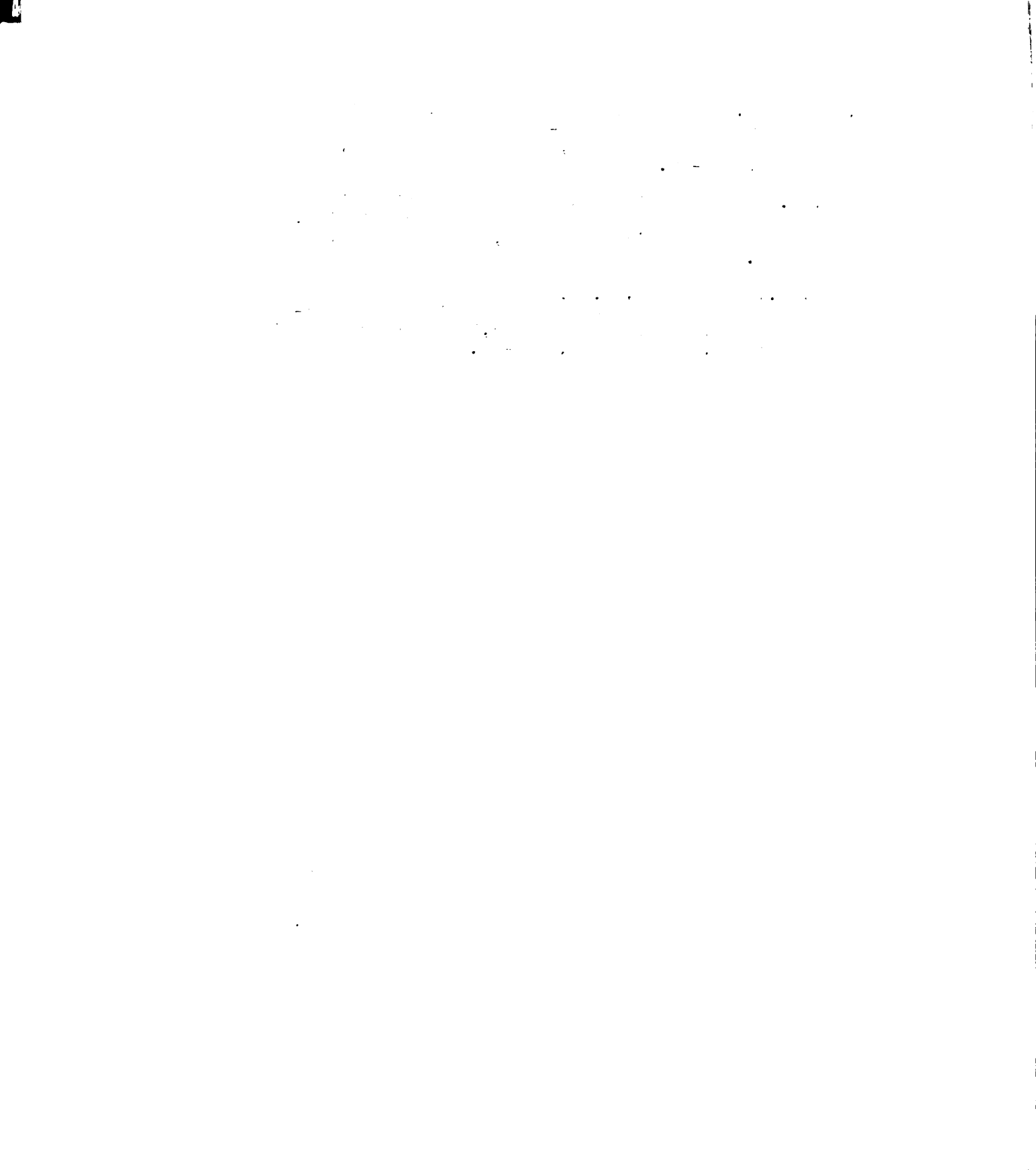
• The eighth step is to monitor the product's performance. This involves tracking sales, customer feedback, and market trends. Monitoring performance allows the company to make adjustments and improve the product over time.

• The ninth step is to iterate on the product. Based on the feedback and performance data, the company may decide to make changes to the product, such as adding new features or improving the design. Iteration is a key part of the product development process.

• The final step is to scale the product. Once the product has been successfully launched and refined, the company can focus on growing its market share and increasing production. Scaling involves expanding the manufacturing process and finding new distribution channels.

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