

ART EXPERIENCE IN A GROUP SETTING

A STUDY OF FOUR YOUNG SUBJECTS

by

LARA MARIE LACKEY

B.F.A., The Nova Scotia College of Art and Design, 1973

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

in

THE FACULTY OF GRADUATE STUDIES
Department of Visual and Performing Arts
in Education

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

SEPTEMBER, 1988

© Lara Marie Lackey, 1988

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Visual and Performing Arts in Education

The University of British Columbia
1956 Main Mall
Vancouver, Canada
V6T 1Y3

Date October 11/1988

ABSTRACT

This thesis provides an analysis of video recordings and written observations of four preschool-aged children as they spontaneously explored art materials within a group setting. The focus of analysis is the extent to which subjects interacted with other children and adults during art material use, and the effect of interaction on the subjects' uses of materials. For each subject, data are categorized and presented according to location, type, and approximate length of activity; presence or absence of others; and types of interactive behavior: watching, verbal interaction; imitation; and distraction from the activity. Descriptive passages are presented which detail specific episodes of interaction, and behaviors of adults interacting with subjects are also described. The conclusions argue for heightened awareness of social interaction as a factor in children's art experiences.

TABLE OF CONTENTS

| CHAPTER | PAGE |
|---|------|
| I INTRODUCTION TO THE STUDY | 1 |
| Introduction | 1 |
| Statement of the Problem | 2 |
| Purpose of the Study | 4 |
| Design of the Study | 5 |
| Subjects | 5 |
| Setting | 6 |
| Instruments | 6 |
| Justification for the Method | 6 |
| Limitations of the Method | 7 |
| Definition of Terms | 8 |
| Delimitations of the Study | 12 |
| II REVIEW OF THE LITERATURE AND RESEARCH . . . | 13 |
| Introduction | 13 |
| Sociology, Social Psychology, and the School | 14 |
| Social Interaction Perspectives in Art Education | 25 |
| Preschoolers and Social Interaction | 32 |
| Summary | 42 |
| III PROCEDURES | 43 |
| Introduction | 43 |
| Setting | 43 |
| Subjects | 46 |
| The Data | 50 |
| Collecting the Data | 51 |
| Interpretation of Data | 54 |
| IV ANALYSIS OF THE DATA | 56 |
| Introduction | 56 |

| CHAPTER | PAGE |
|--|------|
| Compartmentalization of Video Recorded Data | 56 |
| Development of Categories | 57 |
| Collection of Data | 58 |
| Presentation of Results | 58 |
| V RESULTS | 59 |
| Introduction | 59 |
| Results -- Subject A | 66 |
| Results -- Subject B | 79 |
| Results -- Subject C | 90 |
| Results -- Subject D | 105 |
| VI REFLECTIONS ON RESULTS | 118 |
| Introduction | 118 |
| Summary -- Subject A | 118 |
| Summary -- Subject B | 119 |
| Summary -- Subject C | 120 |
| Summary -- Subject D | 122 |
| Summary of Results -- All Subjects | 124 |
| VII SUMMARY, CONCLUSIONS, AND IMPLICATIONS | 131 |
| Summary | 131 |
| Conclusions | 138 |
| Implications | 140 |
| REFERENCES | 143 |
| APPENDICES | 149 |
| Appendix A Tables A-1 through A-7 | 150 |
| Appendix B Tables B-1 through B-7 | 158 |
| Appendix C Tables C-1 through C-7 | 166 |

| CHAPTER | PAGE |
|--|------|
| Appendix D | |
| Tables D-1 through D-7 | 174 |
| Appendix E | |
| First version of check sheet used in reviewing data | 182 |
| Appendix F | |
| Second version of check sheet used in reviewing data | 185 |

LIST OF TABLES

| TABLE | PAGE |
|--|------|
| TABLE A-1 Location of Episodes - Subject A . . . | 66 |
| TABLE A-2 Activities - Subject A | 66 |
| TABLE A-3 Immediate Presence of Others - Subject A | 67 |
| TABLE A-4 Watching - Subject A | 67 |
| TABLE A-5 Verbal Interaction - Subject A | 67 |
| TABLE A-6 Imitation - Subject A | 68 |
| TABLE A-7 Distraction - Subject A | 68 |
| TABLE B-1 Location of Episodes - Subject B . . . | 79 |
| TABLE B-2 Activity - Subject B | 79 |
| TABLE B-3 Immediate Presence of Others - Subject B | 79 |
| TABLE B-4 Watching - Subject B | 80 |
| TABLE B-5 Verbal Interaction - Subject B | 80 |
| TABLE B-6 Imitation - Subject B | 81 |
| TABLE B-7 Distraction - Subject B | 81 |
| TABLE C-1 Location of Episodes - Subject C . . . | 90 |
| TABLE C-2 Activities - Subject C | 90 |
| TABLE C-3 Immediate Presence of Others - Subject C | 91 |
| TABLE C-4 Watching - Subject C | 91 |
| TABLE C-5 Verbal Interaction - Subject C | 91 |
| TABLE C-6 Imitation - Subject C | 92 |
| TABLE C-7 Distraction - Subject C | 93 |
| TABLE D-1 Location of Activities - Subject D . . | 105 |

| TABLE | PAGE |
|--|------|
| TABLE D-2 Activities - Subject D | 105 |
| TABLE D-3 Immediate Presence of Others - Subject D | 105 |
| TABLE D-4 Watching - Subject D | 106 |
| TABLE D-5 Verbal Interaction - Subject D | 106 |
| TABLE D-6 Imitation - Subject D | 107 |
| TABLE D-7 Distraction - Subject D | 108 |

ACKNOWLEDGEMENTS

Credit is due to the University of British Columbia's Child Study Centre, which provided the setting as well as the administrative and technical support for this research. I sincerely thank the children and parents involved, the centre teachers (who were unfailingly welcoming and accommodating), all the camera persons (Sheila Hall, Ray Hart, David Rosenblum, and Shawn Wilson), and Isabel Spears, who typed the extensive written observations which accumulated from the study. In particular I would like to thank Patricia Tarr and Dr. Glen Dixon. Pat designed and implemented the umbrella project in which I initially became involved as recorder, and which produced the data used in this study. She also provided ongoing encouragement and inspiration, for which I am deeply grateful. Glen Dixon, Director of the Child Study Centre, deserves recognition for providing an environment at the centre in which students like myself may be exposed to and influenced by a professional, dedicated, and enthusiastic approach to research; I feel privileged to have worked in such a setting.

I would also like to thank Glen Dixon and Michael Foster, members of my thesis committee, for their

efforts and very helpful remarks toward the editing of this work.

My deepest respect and gratitude go to my advisor and thesis supervisor, Dr. Ron MacGregor, who is undoubtedly the world's most patient man. His help and support have been invaluable to me; had he been less encouraging I am certain that this work would not have been completed.

Finally, I extend my thanks and love to my children, Erin and Meghan, and to my husband David. It is difficult to express how much their care and understanding have meant to me during recent years. Suffice it to say that I share this accomplishment with them.

CHAPTER I

INTRODUCTION TO THE STUDY

Introduction

An involvement with a larger study, directed at understanding the artistic behaviors and development of children under 3 years of age, provided the initial exposure to the setting and data used in this research (MacGregor, 1987; Tarr, 1987). Under the direction of Patricia Tarr, the larger project implemented a data-gathering plan consisting of a series of video recordings and written observations of four preschool-aged subjects as they encountered art materials within the setting. Acting in the role of non-participating observer and note-taker for the Tarr study fostered a familiarity with the subjects and data. This familiarity in turn sparked questions which were outside the initial scope of the Tarr project, and so this independent study was developed.

Initially, the Tarr study was directed at gathering data related to individual interactions of the subjects with materials. Increasingly, however, it became apparent that many encounters actually involved not only the subject but others within the setting as well; out of these events certain patterns emerged. A

growing interest in the ways in which these children interacted with others during their use of art materials, and a curiosity about how such interactions might affect their experiences with materials provided the inspiration for the present work. It is hoped that this effort to describe and analyze the art encounters of these young subjects from the perspective of the kinds and effects of interactions within them will add to understanding of children's art experiences in general.

Statement of the Problem

Many children's visual art experiences -- certainly the majority of those which occur in school -- take place in group settings. There is, nevertheless, a lack of art education research directed at the effects of the group setting on children's behavior with art materials. Some recent literature has re-established the value of copying and interaction as a means of skill development in visual art making (Duncum, 1984; Wilson and Wilson, 1982), and other work has argued that our social and cultural environments affect our understanding of art (Chalmers, 1981, 1984; Hamblen, 1984; and Johnson, 1982). The overriding emphasis in art education literature and practice,

however, has been on unique personal expression. Laura Chapman summarizes the literature in this way:

... the single largest body of theory and research in art education deals with the artistic process; that is, the psychology of making or creating art. Within this literature, the process is typically viewed as an individual effort marked by innovation, by freedom in expression of the "self," and by facility with a particular medium. (Chapman, 1982, p.105)

In addition Chapman points out that our research has focused on patterns of development related to maturation rather than to the effects of interaction or instruction on that development.

Herein would seem to lie a fundamental conflict: on one hand we encourage responses in children's art work that reflect personal meaning, distinct from that of any other individual; on the other, we consistently place children in working environments which provide optimum opportunity for interaction and few chances to work privately with materials. Although our literature reveals a growing awareness of social interaction as a factor within children's art experiences, our practical

research does not yet reflect that awareness. Two questions provide a succinct version of the problem at hand and form the research questions for the study:

- 1) To what extent does interaction occur during children's art activities in a group setting? and,
- 2) To what extent does the group setting assist or interfere with children's use of art materials?

Purpose of the Study

The purpose of this study was to investigate the prevalence of interaction and the effects of a group setting on the use of art materials by four preschool-aged subjects in an organized "preschool" environment. The following hypotheses were generated as categories for investigation.

- H₁ Subjects will tend to use art materials in the immediate presence of others.
- H₂ Subjects will tend to watch or observe others using art materials prior to, during, and after the subject's own use of materials.
- H₃ Subjects will tend to interact verbally with others during their own interaction with art materials.
- H₄ Subjects will tend to engage in imitation or copying of others' use of materials through

gesture or image making.

H₅ Subjects will tend to be distracted from the use of art materials by the presence or actions of others.

H₆ There will be a positive relationship between subjects' interactions with others and the intensity of subject involvement with art materials.

Design of the Study

Subjects

The subjects in this study were four preschool-aged children, two boys and two girls, whose ages ranged from just over two years to almost four years over the period in which data were gathered. The subjects were chosen for the umbrella project referred to in the introduction because they were the youngest members of two classes that commenced at the time the study was initiated. The subjects, referred to as "A", "B", "C", and "D" for the sake of anonymity, obviously were distinct personalities. Brief descriptions of these individuals are included in Chapter III as a means to understand their behavior within the study.

Setting

The University of British Columbia's Child Study Centre provided the setting for this study. Subjects were observed as they took part in morning or afternoon preschool programs offered by the Centre. Facilities contained equipment for play with water, "house" and dress-up materials, blocks, puzzles, indoor climbing and riding toys, books, and a variety of art materials.

Instruments

A JVC video camera, recording on 120 minute VHS (Scotch) videocassettes, and handwritten notes were used to collect data for this study. Analysis was assisted through the use of check sheets developed by the researcher. Two versions of this check sheet were developed. The first, which appears as Appendix E was made prior to analysis. The second, which appears as Appendix F, was a version of the first, revised to allow for additional comments and to simplify the analysis.

Justification for the Method

The combined use of video-taped and written records was appropriate within this study for a number of reasons. Unlike written observations, video recordings enabled the researcher to capture complex

interactions (including verbal exchanges) precisely, and made repeated review possible. The video camera provided an effective counterbalance to observer bias as well. The camera, nevertheless, had a limited range, and could miss important details occurring outside its range. The observer, while less adept at producing precise transcripts, could more easily take in relevant events happening elsewhere in the setting, and was able to make notes with respect to possible meanings behind given interactions. The two approaches together provided a clear record of occurrences.

Limitations of the Method

Three difficulties, however, existed with the method used here. The first was that the data, though comprehensive, were not gathered with this specific study in mind. The result was that often greater attention was directed (particularly in the early parts of data-gathering) at the behavior of the individual subject, while disregarding interactions with others. This fact made it impossible, when field notes and video tapes were reviewed for this present study, to obtain needed information from some episodes. The second difficulty with this approach was the sheer volume of available data, necessitating rather severe

decisions about which aspects of the data would and would not be attended to. Also with respect to the volume, it is argued that it would be humanly impossible to count every single instance of certain activities within the data. Although certainly an attempt was made toward this goal, numerical results should be understood as meaning "as least" x number of instances were identified. As a result, some relevant information may have been missed. Finally, even though video technology allowed the gathering of vast amounts of information accurately, the analyst could not of course, make assumptions about motivations or intentions of subjects without very concrete evidence. The researcher was still limited largely to an account of what subjects did rather than why they did it. This fact limited the conclusions which could be drawn from the data.

Definition of Terms

The following definitions were used for the purposes of this study.

Art materials refers to paper, paint, brushes, pencils, chalk oil pastels, crayons, pens, felt markers, scissors, glue sticks, play dough, clay, or any other material or tool used in painting, drawing, scribbling,

cutting, molding, or printmaking activity. Blocks are not included. The pencil sharpener is included.

Art experience or art activity refers to interaction with one or more art materials, tools, or products.

Interaction with art materials includes not only the use or exploration of art materials, but also the manipulation and organization of tools, materials, and products; watching another use or interact with tools, materials or products; and talking with another about materials, tools, or products.

The immediate presence of others within the study refers to the fact that another individual is seated or standing within the subject's easy touching distance for all or part of an episode. This includes those seated or standing immediately beside the subject for the most part; however, many incidents include those persons across from the subject if in very close quarters (easy touching distance).

An episode within this study is defined as the period of time in which a subject enters an art area and remains there interacting with art materials. It ends when the subject indicates completion by starting a second art project in the same location or by leaving the area to begin another activity. When subjects

leave the art area temporarily to get supplies or to look at another activity, but return immediately to continue a project, this is considered one episode.

Art area within this study refers to those areas or stations within the setting in which the subjects interact with art materials. With few exceptions, these are the painting easel, the college/drawing table; the clay or play dough table; the pencil sharpener; and the chalkboard. Occasionally a tool or material is removed from its original site and used, etc. in another part of the setting. This site then is considered to be an art area for the purposes of this study.

Verbal interaction refers to verbal remarks made to the subject by another or by the subject to another during an art episode.

Watching others refers to observing the use, manipulation, or organization of tools, art materials, or products within an art episode.

Distraction refers to looking away from art interaction to other activities in the setting. Frequent distraction is defined as more than 6 instances of looking away or more than 3 instances of sustained (prolonged) looking away. (Note that distraction is

distinct from watching.)

Imitation is considered to have taken place when a subject copies the action or activity of another immediately after watching it.

Playing with art materials for the purposes of this study refers to interaction with art materials that has a pretend or fantasy component made apparent by verbal comments or by actions. (A boy "flying" a clay sculpture through the air while making a buzzing noise, for example.)

Lengths of episodes in this study are referred to as brief, medium, and long. A brief episode is less than one minute. A long episode is 10 minutes or more. A medium episode is any length in between.

Working together on the same surface in this study refers to two individuals who used art materials on the same project, piece of paper, lump of clay, etc.

Using a material/tool refers to the use of an art material in painting, drawing, scribbling, cutting, gluing, molding, printmaking, or other art activities.

Manipulating a tool refers to the examination or exploration of an art tool (scissors, brushes, clay tools, for example) rather than its use in painting, drawing, gluing, etc.

Organization of tools/materials refers to sorting or returning art tools/materials to containers or designated storage locations.

Delimitations of the Study

This study focused on the behaviors which subjects exhibited during interaction with art materials, including how they interacted with others during art episodes. End products have been occasionally referred to, but have not been analyzed. Where behavior observed outside the art area illuminated or informed behavior in the art area, it has been referred to as well. Neither art products nor behavior outside the art areas were fundamental parts of the study, however. Furthermore, while the subjects' behaviors were the focal points of this work, the behaviors of others who interacted with the subjects needed also to be addressed in a study concerned with the group setting. Both the presentation and the analysis of the data, therefore, have referred, in addition to the subjects, to others within the immediate setting. Finally, because only four subjects have been dealt with in a specific context, results have not been presented as having general implications for the broad preschool population, but rather as considerations for further research, perhaps involving larger numbers.

CHAPTER II

REVIEW OF THE LITERATURE AND RESEARCH

Introduction

Research in the field of Art Education has, since the turn of the century, been dominated by a focus on psychological issues, and on the behavior of the individual in producing art (Chapman, 1982, p.105). A parallel influence has been evident in the notion that the ideal in children's art should be represented by spontaneous, unique work (produced without adult interference or visual models), thought to be the result of inevitable development. A concise description of the forces which brought about this state can be found in Smith (1982, pp.296-298.).

Within the past 10 to 15 years, however, a growing movement within the field can be identified which is characterized by its attention to sociological and social-psychological issues. This trend has heightened awareness of ways in which socio-cultural factors affect art education, and has also promoted an adjusted view of the needs of the developing art student. This view, which recognizes the intimate interrelationship between psychological and sociological issues in the field, prepared the setting out of which the present

work has grown.

The discussion that follows will summarize relevant literature and research. In order to present a somewhat extensive background, I have selected sources from the fields of sociology, social-psychology, art education, early childhood education, and psychology.

Sociology, Social Psychology, and the School

Perhaps an appropriate point at which to begin is with Berger and Luckmann (1966), who argue that one's very sense of what is "real" in everyday life, both objectively and subjectively speaking, is actually the result of our humanly constructed system of common knowledge. Built up from arbitrarily habitualized interactions with others into a network of powerfully influential institutions, this everyday "reality" is made all the more concrete, is maintained, stored, and transmitted through language. Such an analysis explains to an extent how human beings world wide, so physically alike, can easily have developed vastly different cultures, versions of "the way things are". For the purpose of this study, however, the point is a basic one: our personal perspectives, in a most profound way, are molded by the society in which we

live, specifically through the interactions that we have with others in our environment. We must not, therefore, make assumptions about "what is" without taking into account that influence.

Discussion on how environment can affect student learning is found in a number of texts. These have been briefly summarized to provide a sense of the scope of issues which this topic encompasses.

Sarane S. Boocock's Introduction to the Sociology of Learning (1972) concerns itself specifically with "school success" as opposed to learning in general, arguing that "adequate performance in school requires more than purely intellectual skills" (p.4). Learning, she notes, requires substance or content -- what it is that one learns or achieves; some kind of interaction with another person or object; and a cognitive change or movement from one point to another. She points out, however, that what one learns and how one is taught in school are dependent upon what is perceived to be educationally valuable and on the particular view of "what children are like" within a given society. Boocock believes that human beings have an innate drive to interact with their environments; she therefore contends that the school's mandate must be to ensure

that its environment stimulates the development of intellectual potential in every student. Further, she argues that, regardless of the natural intellectual abilities possessed by individual children (our measures of which remain imprecise), it is social background which prepares one for or prevents one from developing a readiness to receive the "learning" available in schools. In analyzing these factors, Boocock directs attention to research available on family influence and structure; sex differences; individual cognitive styles; school and classroom structures and roles within them; and teachers and peers, each as they have impact on learning in school.

Her conclusions overall emphasize the important role of interaction, with parents, with peers, and with teachers, in affecting school success. Especially she notes that the values and the composition of the student body, affected in turn by societal and family values, play a very strong role in predicting student achievement.

A second text, The Social Psychology of School Learning (McMillan, 1980) analyzes not learning generally, but the factors "in social interaction that affect pupil decisions to engage in specific learning

behaviors" (p.3). Dealing with social psychology rather than sociology, this text places greater emphasis on individual motivations affecting behavior. Nevertheless, there is a substantial amount of overlap in the topics covered by Boocock and McMillan. McMillan notes that his approach assumes "as a theoretical basis the notion that learning behavior is understood best by examining the variety of individual interactions within the social environment" (p.12).

Drawing on theory provided by a number of recognized social psychologists (Brook and Erickson, and Bandura, among others) McMillan proposes a model which suggests that, in order to understand the learning process, one must analyze how individuals make decisions related to behavior within a social context. Factors to be weighed, he says, include individual characteristics, the needs that individuals bring to a given situation, and the feedback they receive from "significant others", from the group, and from the organizational structure as to appropriate behavior within a setting. Particular points are made with regard to the familiarity or unfamiliarity of the setting, whether the setting stipulates specific or ambiguous behavior, and the credibility of significant

others, as factors influencing behavior.

From this framework, Irene Hanson Frieze (1980) focuses on individual beliefs about the causes they attribute to success or failure within a setting. Noted are factors such as whether determinants are seen as being influenced by luck or effort, intentionally or unintentionally, internally or externally. Of interest to the current study, evidence is found that success for artistic tasks is more often attributed to ability than to effort.

In a discussion provided by Thomas L. Good (1980), it is argued that teacher expectations influence achievement. Again with pertinence to this study, the particular influence of teachers over young children is noted:

For a variety of reasons, it would seem that teacher expectations exert more influence on student achievement in elementary school than in secondary schools. Young children are more impressionable and are more anxious to please adults than are older children In short, teachers have the chance to define for young students the meaning of school work

and their level of proficiency in performing it (p.106).

On the subject of student-student influences on achievement, David W. Johnson (1980) notes that "in the classroom, the influences resulting from student-student relationships have more powerful effects on achievement, socialization, and development than any other factor, yet the importance and power of peer interactions in the classroom are often ignored" (p.25).

Thought to be a direct result of peer interaction, the skill of "perspective-taking" is also particularly valued educationally. Notes Johnson,

Social perspective-taking may be defined as the ability to understand how a situation appears to another person, and how that person is reacting cognitively and emotionally to the situation. Piaget views all psychological development as a progressive loss of egocentrism and an increase in ability to take wider and more complex perspectives. (p.130)

Other issues dealt with in this text include the school as a "mini-culture", transmitting norms and

roles; the influence of the hierarchical elements of the school on students and teachers; and the effects of rewards and punishments on motivation.

With respect to the final issue, and with applicability to art education, a study by Lepper, Greene, and Nisbett (1973) is cited in which the "effect of rewards on the intrinsic value of drawing on preschool children" was measured. In this study,

three groups of children were used...; one group agreed to receive a reward for drawing; the second group received an unexpected reward; and the third group was given no reward. The group that expected and received the reward showed a decreasing interest in drawing over time than the other two groups.

(p.222)

The work points out the importance of developing positive attitudes in students, perhaps the strongest overall message of the text. Such attitudes would value study and achievement for their intrinsic rewards rather than for extrinsic ones; they are influenced by prior experiences as well as the enthusiasm of the teacher and other students for a particular activity, and are related to a positive self-concept.

A third work dealing with social influences in school settings is We've All Got Scars: What Boys and Girls Learn in Elementary School (Best, 1983). This work documents a 4-year study in which the author acted as participant-observer/confidante for one class of students in an elementary school. Particularly interested in reading achievement, Best's involvement led her to pursue a hunch that acceptance by the peer group might be an important motivating factor in learning to read. It also caused her to uncover a complex student sub-culture, existing outside the academic agenda, particularly influential in this case on the boys in the school. Best's work describes the evolution of a group of "disparate" males in grade one, to a highly defined "secret club" in grade three. The club had a clear membership, and its rules provided an agenda whereby its members could "prove" their manhood through a series of challenges. The club excluded girls, but also boys who were not deemed to be up to the standard. Coincidentally, the excluded boys were the very ones who seemed to develop low motivations to learn. The club grew powerful enough to impose its own will on the classroom at times, in spite of efforts by the teacher to overcome its influence.

The study led Best to conclude that peer interaction in schools is in fact a powerful influence, one that can define and enforce behavior and effect motivation substantially. Indeed, the effects on the excluded boys seemed to reach beyond the consequences of low achievement; those children were, according to Best, emotionally "scarred" by the experience. To deal with the situation, Best instituted an ongoing discussion group with the members of the whole class. As a result the students gradually gained the skills needed to communicate with one another more openly. In later years, members of the class retained the close supportive nature of their group, and appeared to be less easily influenced by negative social forces which affected other students in their school.

A final text of general relevance to this topic is The Social Psychology of Creativity (Amabile, 1983). Again dealing with social psychology rather than with sociology, Amabile concerns herself predominantly with factors, especially kinds of human interactions, that affect creativity. While it is clear that creativity and artistic behavior are not necessarily one and the same, creativity has long been a concern of art educators, and a significant amount of tasks provided

to students by contemporary art educators can be said to require "creative" skills as Amabile defines them.

In her summary of the research reviewed, Amabile admits that whether or not it is possible to enhance creativity remains in question. It is easier to determine how creativity is interfered with than how it is increased. Nevertheless she notes a number of socio-psychological factors which can affect creativity. In particular she discusses task motivation and the necessity for the existence of intrinsic rather than extrinsic motivations. Control, especially with respect to how to approach or solve problems, is cited as being important to the creative process as well. The issue of modelling, or the value of having a mentor or a creative model, is identified as being rather complex. On one hand, exposure to a creative model can prove inspirational in many cases; on the other, it is possible for individuals to become over-dependent on a model and be unable to break away from that influence in order to develop a person approach.

Amabile's advice for providing a school environment conducive to creativity is that:

The parent or teacher should be encouraging but rather detached, fostering independence and self-direction.

Evaluation and surveillance should be kept to a minimum; evaluation might be approached by encouraging students to make positive critiques of their own and other's work.

The physical environment should be "perceptually and cognitively stimulating" (p.196).

Peer pressure to conform can sometimes be a negative force; teachers might consider encouraging students not to conform.

Student programs should include exposure to creative models and to cultural diversity.

An intrinsic motivation should be fostered by focusing on the enjoyable and positive aspects of work.

An unstructured rather than a traditional, controlled classroom environment should be established.

A particular orientation begins to develop from the accumulation of research summarized in these texts.

This orientation speaks to the overall importance of social interaction as a factor in learning. It reminds us that the environment in which learning takes place is of human construction, and that the choice of environment may encourage or exclude certain learners. While the teacher is a key player in creating the educational atmosphere, the student group and the values it promotes also have a high impact on individual decisions made in school. As well, the arts, or at the very least creative activities, are not less affected by interaction and the social environment than other subjects in school. These ideas seem to provide the inspiration for much contemporary research and literature within art education. A summary of that work is provided next.

Social Interaction Perspectives in Art Education

Among the first to promote sociological perspectives within the field of Art Education were Brent and Marjorie Wilson (1982; 1982a; 1977). Critical of tenets in the field influenced by Viktor Lowenfeld, especially those which supported the notion that children's artistic skills should be allowed to develop spontaneously and without adult interference, the Wilsons point out that art educators actually

influence children's art products through that very policy of non-intervention. Evidence for these accusations is found, they argue, in the distinctions between "school art" and "non-school" work produced outside the school agenda. The latter form, state the Wilsons, stems from sources found in television and comic books, and seems to be the more meaningful form to young artists, being sparked by internal motivation, through which real-life issues are explored (1982).

The Wilsons challenge the notion that much of children's graphic work is actually universal, noting that a specific form, thought to be among those produced by all children in early stages of development, has since disappeared and can be traced to social influences of the time (1982a).

Further, the Wilsons find that the concept of spontaneous development in children's drawing has probably interfered with many children's graphic development, largely through the implication that each drawing task involves developing a unique image. Rather, the Wilsons theorize that drawing is really a kind of visual sign-making that begins by developing a basic "schema" for each of a variety of objects, then altering it to "fit" the real or imagined image. These

basic drawing "programs", say the Wilsons, emerge not from a creative explosion but through copying images available through the media and from the "teachings" of siblings and peers (1977).

Advocates of a particular kind of active interaction and cooperation between adults and children in order to encourage graphic development, the Wilsons note that children often choose to draw in groups of their peers, and regularly show one another "how" to draw.

Overall the Wilson literature builds an altered perception of children's graphic experience, one steeped in media and socially influenced imagery and nurtured by peers -- quite outside the formerly established sphere of art education.

Paul Duncum (1984) provides support for the Wilsons' contentions about copying and interaction in art-making through examining the childhood experiences of artists and illustrators. Copying, especially from popular images of the day, was the most frequently used strategy reported; as well, several examples of adult artistic role models were found. Research conducted by Norman Yaker (198X) concludes that the greatest gains in children's drawing abilities are associated with

copying artist's images as opposed to drawing from a "real" object. Yakel argues that instruction that includes copying and imitation should be incorporated into young children's visual art education.

Diana Korzenik (1981, 1979 and 1974) also offers sociological perspectives in art education. In an early article (1974) she concludes, through research involving 5 to 7-year olds, that the capacity to make images which are "readable" to others -- understandable from another's perspective -- may be a reflection of social maturity. A second article (1979) proposes that drawing must be a learned rather than an innate behavior for two reasons. First, she notes that, physiologically, we are unable to "see" the world in still images. Drawing is, therefore, a matter not of depicting what we see, but of transforming what we see into "frozen pictures". To do this, says Korzenik, children must use what they have learned about making images through watching people make and use art, and listening to people talk about art; in other words, they draw on the pool of social knowledge available to them about the topic. Because, says Korzenik, at least two sets of common knowledge exist in our society (one related to a children's culture, and one related to

adult culture) information about drawing which children receive may vary.

Finally, Korzenik (1981) provides evidence that awareness of child art (as distinct from adult art) is linked to the recognition of "childhood" as a phase in human development. Further, she argues that our emphasis on a particular phase of child art may be related to general trends in the world of adult high art.

Graeme Chalmers (1981, 1984) was among art educators to draw attention early on to the fact that art education must be viewed with regard to social issues. His article "Art Education as Ethnology" (1981) argues that art should be conceived of as cultural artifact, and therefore as a starting point for discussion on a broad range of social studies. In this vein, art education would concern itself predominantly with the "why" of art.

In a later article (1984) he reminds the reader that our "aesthetic" perceptions and values grow out of a cultural context; thus we impose meaning on art works from the perspective of our own cultural backgrounds.

Karen Hamblen (1984) reinforces these notions, arguing that "artistic perception is a matter of

learning socially defined expectations of the aesthetic" (p.21). Nancy Johnson (1982) comes to similar conclusions, reminding us that children's meanings about art stem from social knowledge, transmitted by art teachers enculturated in particular ways.

Joseph R. LaChapelle (1983, 1984) has concerned himself particularly with social issues inherent in creativity. In "Creativity Research: Its Sociological and Educational Limitations" (1983) LaChapelle discusses the changes that have evolved historically with respect to the concept of creativity, and the need to look more closely at the sociological issues related to it. On one level, he points to the fact that our understanding of creativity is linked to influences of social thought at a given time. Also, he notes that we must be careful to define creativity in ways which are useful to visual art education. He emphasizes that, because arts groups exist within a pluralistic society, many definitions of creativity must be tolerated.

A second article by LaChapelle (1984) points out that, in the past, sociological and other studies directed toward visual art have focused on the alienation of the artist and the artistic community

from the dominant culture. According to LaChapelle, however, contemporary researchers have begun to place greater emphasis on the ways in which the artistic community functions as a cohesive social structure. This allows art making to be viewed not as the isolated activity of an estranged individual, but as work taking place within the context of a particular community environment. This concept in turn allows us to recognize that many forms of art may be produced within a society, and that we need not feel compelled to "rank" them according to value.

It is clear that from this summary that many of the sentiments evident within the sociology and the social psychology of general education have permeated art education as well. This is only surprising in light of the strength of former directions in the literature that focused on the personal and the spontaneously developmental natures of art activity. Current thought in the field now recognizes that art is the product of cultural attitudes and opinions, and that educators will influence children's art products even if attempting not to.

In accepting that art is a cultural product, educators can therefore recognize that certain artistic

conventions can be and should be taught. The most effective methods found to date seem to involve interaction: with art products, with teachers; with peers. At the same time art educators need not deny the uniquely personal qualities of the artistic process, that part of art-making that involves the personal interpretation of concepts and feelings. It is clear, however, that even this "creative" aspect of art demands a particular social environment. The need for a balance between a focus on personal vision and social influence is apparent.

Preschoolers and Social Interaction

Having established evidence of sociological perspectives in both general education and art education, it remains necessary to summarize related literature in the field of early childhood education. Here the orientation alters somewhat, for the tendency with early childhood literature is to view preschoolers' activity within the context of play and exploration of the environment. Art materials are but one category of items available to the child for investigation. Literature relevant to this section can be found within discussion of play and social interaction among preschoolers as well as within

literature on preschool art, and the role of the teacher in preschool settings. The first series of articles reviewed deals with interaction generally among children of preschool age.

Mueller and Lucas (1975) suggest three developmental stages of toddler interaction. The first stage, typical in one-year-olds, involves no (or very infrequent) exchanges between children; rather, interaction focuses on a play object, in situations when one child's interest in a toy attracts another child to the object as well. A second stage, called "simple and complex contingency exchanges" (p.237) may include behaviors such as imitation and turn taking, but the interaction is likened to substituting a child for an object or toy, and is not a true exchange. The final stage, "complementary interchange" (p.247), involves reciprocal, interdependent actions, or interaction in the conventional sense.

A study by Mueller and Brenner (1977) found that toddler interaction increased as children matured, and that sustained interactions were most frequent among age-mates with whom subjects were acquainted. The study distinguishes between interaction with people and with objects, and between interaction and social

behavior (vocalizing, looking). The authors note that nearly all the interactions observed in their study occurred as a result of interest in a play object, also pointing out that one child's interest in an object seemed to make it more interesting to others. Finally, Mueller and Brenner argue that parallel play (playing side by side without exchanges) seems to be a source of interaction. This argument, they note, runs counter to the notion that one develops social skills first and then begins to interact.

A third article dealing with social interaction among preschoolers (Etaugh, Collins, and Staulcup, 1979) compares the level of social participation in a group of "10 boys and 3 girls (mean age at the beginning of the study = 23.8 months) over a period of 8 months" (p.159) with the results of earlier research. The findings of this study were that "unoccupied behavior decreased over semesters, while parallel play increased" (p.160) and that subjects spent more time in solitary, unoccupied, or onlooker activity than did subjects of compared studies. The results were attributed to the fact that subjects of this study had fewer siblings and therefore fewer opportunities for socializing than did subjects of the compared studies.

A distinction has been made by researchers between interaction with an object and interaction with another individual. A discussion of interaction with novel objects by 3 to 5-year old subjects is found in a study by Schneider, Moch, Standfort, Averswald, and Walter-Weckman (1983). Here the authors refer to earlier studies in which the sequence of behaviors related to investigating a novel object by preschoolers moved from visual inspection to manipulation to play. These authors observe that visual inspection of an object seems to provide a basis from which the child decides to continue interacting with the object or to move on to something else. Manipulating is the next step, later evolving to "playing" with the object, which is defined in the study as either unconventional manipulation or transforming the function of the object -- using it as if it were something else. They note that "play" with the object increased with the age of the children. Basically, they concur with the sequence of behaviors described in the earlier studies with which they compare their work, but find that the process is not always linear; children may move back and forth between play and manipulation, for example.

Parten (1971) deals with interaction, placing art activity within the overall context of the preschool setting. Using six categories of behavior (unoccupied; solitary; onlooker; parallel, associative; and organized supplementary play), Parten made a number of observations. These were that: 1) children were most commonly observed playing in groups of two with partners of the same sex; 2) it was usually not possible to determine whether social interaction or a play object served as the motivation for a child to engage in play; 3) of 110 activities identified, 12 were observed over 100 times each. The most commonly observed activities were, in order of decreasing frequency: Sandbox play; play with dolls; play with trains; riding "kiddie kars"; and play with scissors and paper. Parten notes that the use of clay and paint were the 6th and 11th most frequent choices respectively. She observes that "the more complicated construction play that utilized clay, paper, or paints became more popular as the children grew older" (p.89).

Parten also points out that painting attracted more onlookers than any other activity and that children "occasionally conversed about their paintings and were eager to display the finished products"

(p.93). In rating activities according to their potential for encouraging socialization, playing house scored highest. "Sand play and constructive work with clay, paper, beads, and paints, are characteristically parallel play activities," she concludes (p.93).

The work presented by Wolfgang and Sanders (1986) is also helpful in placing art activity within the general context of the preschool setting. The authors refer to two categories of play, sensori-motor and representational. Sensori-motor play, say Wolfgang and Sanders "begins at birth and continues throughout life. This is active exploration of the world through the senses and through small and large muscle systems. In SM play, the child is not attempting to express internal thoughts, but rather in exploring the external world at the body level. SM seems to be sustained by a drive towards mastery" (p.51). The second category of play, representational, includes both symbolic play and constructive play. According to these authors, representational play is understood to be that form through which an individual expresses personal feelings and concepts. In symbolic representational play, the child uses dramatic "make-believe" in a range of ways to explore ideas and situations. Constructive

representational play, on the other hand, involves the use of materials to build or construct forms and images related to individual perspectives. The latter form, of course, is the one into which visual art activity would fall. The authors include blocks in addition to traditional art materials within this category. From this orientation, the authors move on to the presentation of a "teacher behavior continuum"; their ideas on this topic will be included in the next section.

With respect to the teacher's role in encouraging play within a preschool setting, Virginia P. Green (1986) argues that adults need to take a stronger role. She promotes "play intervention training", which takes the teacher from a strictly facilitating role to one in which he/she may intervene in play in order to "...revitalize, clarify, and expand the play, but not to promote content or manage the activities" (p.17). This may take the form of asking questions or making suggestions on one hand to modelling behavior on the other. She notes that adults tend to be hesitant to become involved in children's play due to embarrassment or the belief that such action will be a negative force. Adult hesitations can be overcome easily with

training, however, notes Green.

Joan Tamburrini (1986) concurs with Green in advocating greater play intervention on the part of teachers, also distinguishing extending and redirecting interaction. She notes that "there is a growing amount of evidence that children function at their most capable when the adult's actions synchronize with the child's intentions and help elaborate them" (p.46). Such involvement shows a basic respect and valuing for play activity, argues Tamburrini.

The work by Wolfgang and Sanders (1986), referred to previously, provides a continuum of techniques for teachers who would like to sustain children's play within a preschool environment. The categories they deal with are: active looking on; non-directive statements; question making; directive statements; modelling; and physical intervention. The goal, they propose, is to maintain and extend play by using the least intervening form possible, retreating to active looking-on behavior when the play is sustained (p.61).

Olivia N. Saracho (1986) deals with play and cognitive style in preschoolers, noting that different personality types tend to play in different ways. In particular, she discusses field-dependent and field-

independent behavior. The field-dependent child, she explains, tends to be more socially oriented, more dependent on adult authority, and cooperative. One field dependent child often prefers to play in small groups and "likes to imitate the roles of others" (p.25). In art work, Saracho notes that the same field dependent child "draws circles to represent objects and sticks to represent anything long such as trees, flowers, or people" (p.25). One field independent child, on the other hand, prefers to play alone and "uses art work and block building to communicate ideas" (p.26). The author notes that this child's art work tends to be detailed and complex.

Saracho suggests that teachers be sensitive to cognitive style, using activities which complement a child's approach near the beginning of the year, but gradually encouraging activity less consistent with the child's cognitive inclination over time.

The perspective concerning preschoolers and interaction which is pieced together by these studies is one which recognizes that the nature of social interaction is developmental; that types of interaction are dependent on the personality of the individuals in question, and that adults play a major role in

facilitating or maintaining interaction and play with objects and with people. Further, some evidence is found that a child's use of art materials may reflect an approach to exploring the environment or be motivated by an interest in interaction.

Leah Sherman (1983), for example, notes that she shifted in her study from making observations of single, isolated, children to observing children interacting freely in a classroom setting. This change was made at the request of the teachers, who wondered whether children's experiences observed alone would be the same as those of children working in a group. Sherman notes that although observation became more complicated, an "interesting new factor ... emerged in the group situation" which was "imitation and peer influence" (p.139). She points out that children seemed to imitate one another briefly but would then proceed to use the action in their way, "elaborating upon it and adapting it to a unique propose" (p.140). She concludes that "there seemed to be a need to reinforce discoveries by sharing them verbally" and that the "medium became a vehicle for common experience and social learning" (p.140).

A second study (Fucigna and Ives, 1982) recognizes social activity as being reflected in art behaviors by the age of 24 months, including watching as a precedent to "entrance into the art area or first manual exploration of an art media" (p.49), and monologues carried on aloud while working with art materials. Other classmates, the authors say, "do not directly imitate, but will take in others' input and translate it into their own concerns" (p.49).

Summary

To conclude this survey of literature, it is apparent that: 1) general trends in education literature reflect an interest in the effects that environment has on student learning, 2) there is recognition among art educators that art activity can no longer be considered only within the realm of the isolated individual artist, and 3) issues related to social and object interaction in early childhood pervade children's use of art materials at that age. These ideas, then, provide a background from which to proceed with the current study.

CHAPTER III

PROCEDURES

Introduction

As previously noted, this study was conducted at the University of British Columbia's Child Study Centre, in Vancouver, British Columbia. Collection of data took place over two school years, 1984-85, and 1985-86. Analysis was conducted in 1987-88.

Setting

The setting in which subjects were observed was an ongoing preschool program, offered by the centre, which children attended for two or three half-days per week over the school year. The program was designed to simultaneously provide a preschool service to the community and to accommodate the university's need to conduct research in the field. Note takers, video cameras, and researchers conducting "tests" were common in this setting, and while they did not go completely unnoticed, they seemed to be taken rather for granted by the children. The staff took consistent precautions to ensure that an "overload" of researchers did not occur at any point, and the quality of the children's experiences was stated always to be a primary consideration.

The first and second years of the program took place in different rooms of the building, (an annex of an elementary school on the West side of Vancouver) but the settings were essentially similar, and such as might be found in any well-equipped preschool facility. The chairs, tables, and play equipment were all appropriate to the size and safety needs of young children. The equipment was grouped according to types of activity and placed invitingly around the room. During the first year, for example, stations included a house-play area with kitchen equipment, dolls, beds, and chairs. Other stations included a water-play area, a library area, a dress-up area, a space for blocks and puzzles, a music area with piano, percussion instruments, and record player, and several "art" stations.

The art stations consisted of a two-sided easel stocked with paint in cans, brushes, and clean paper. A table was available for 2-D art work, usually displaying an assortment of drawing materials and/or glue and scrap papers for collage. Additional tools and materials were available on open shelves at one side of the table. A second table was ordinarily set up for clay or play dough work, with individual boards

and a variety of cutting and decorating tools available. A small bin of clay was on the floor to one side of this table.

In addition to these stations, a small slide, a rocking "boat", and various "ride-'em"-type toys were available for children to use. A large rabbit named "Lop" roamed the room, to the children's great interest and delight.

During the first year, children arrived, were greeted, hung up coats at designated "cubbies", and then spent a short time with the parent. After a brief period (which became briefer as the year progressed) the parent departed for a discussion group across the hall. Children were allowed to move freely throughout the room, making their own choices about activities in which to become involved. One teacher and one assistant remained with the children. These adults talked with and assisted the children, offering encouragement rather than direction in most cases. The time was about one and one-half hours in total, and was loosely structured in three parts, consisting of free play, snack time, and a brief period of outdoor play before going home.

In the second year, the program was very slightly more structured in that it included a "circle time" in which themes for the day were introduced and activities available that day were discussed. Children were asked to make a specific choice for a beginning activity before leaving the circle, in order to avoid overcrowding at popular stations.

Stations provided in the second year were similar to those offered in the first, but sometimes were more directed by virtue of the materials offered. For example, heart-shaped paper was provided near Valentine's Day, and pine cones, glitter, and glue were set out near Christmas. Play dough was offered more often than clay.

The teachers in the second year were different from those in the first year, however the approaches were quite similar. Little specific instruction was given, and the emphasis was explicitly on helping children to explore activities and materials and to gain confidence and independence while simultaneously respecting the rights of others using the space.

Subjects

The subjects were the four youngest members of the centre classes provided for two-year-olds when data-

gathering began. The following brief descriptions introduce the subjects:

Subject "A" A highly energetic and confident boy, "A" was interested in the "ride-'em"-toys and other active aspects of the play environment. It was common for him to spend a good portion of his time in the first year riding round and round the room, stopping briefly at many activities. He was known as an "explorer of the environment." In the second year, when "ride-'em"-toys were not available, he showed interest in manipulating tools and using large blocks and trucks, as well as many other activities. He was very independent, often working alone rather than with others. He was 2.0 years at the start of the project.

Subject "B" A quiet, focused girl, "B" showed a great deal of interest in art work during her first year. She was, according to her mother, rather experienced with art materials, having

an older brother and sister who used them regularly. She tended to work very close to her drawings; her mother in fact suspected that she might be somewhat near-sighted. She also showed a great deal of interest in books and reading and seemed to enjoy particularly being with adults, often seeking them out for various reasons. Subject "B" was 2.2 years at the start of the study.

Subject "C" A quiet, often serious boy, "C" could also be very focused. One of his outstanding characteristics was that he spent a great deal of his time watching others, and was among the most observant of subjects. He would often, for example, notice the camera or the note taker when others would not. He spoke very little in his first year and seemed rather shy. His confidence appeared to increase greatly, however, by the second year and although he remained quiet, he began to enjoy being with the other children. "C" was 2.2 years at the

start of the project.

Subject "D" Also rather quiet and watchful, this little girl seemed, however, to particularly enjoy the other children and would often seek them out or initiate encounters with them. She spoke rather frequently to both adults and children, and her interests were diverse. She tended to spend a "medium" amount of time rather than a noticeably long or short amount at the activities. She also seemed to increase in confidence as the project progressed. "D" was 2.0 years at the beginning of the project.

Each of the subjects, being very young, had had limited previous exposure to the kind of setting in which this study was conducted. Also due to their ages, none of the subjects was highly verbal at the start. During the first year, although some children were marginally more talkative than others, subjects spoke mainly when it was absolutely necessary, often when responding to an adult. Over the period of the study, of course, the children matured, and, as a

result, grew increasingly more verbal and self-assured.

The Data

Two types of data sources were used in this study. The first source consisted of six 120-minute VHS videocassettes filled with recordings of subjects as they interacted with art materials throughout the classroom, and particularly as they moved into designated art "stations." Pre-scheduling for the taped sessions was done in such a way that there would be equal opportunity to record each subject on a monthly basis over two school years. In most cases, each taping recorded two subjects, because they attended class at the same time. The camera person and observer were available for a period of approximately one hour for each of the 21 taping sessions used. Subject A was involved in eight tapings; Subject B was involved in eight tapings; Subject C was involved in 10 tapings; and Subject D was involved in 9 tapings. The amount of data varied among subjects due to the individual's decisions about whether or not to use art materials. Occasionally a subject missed a taping session due to illness or some other circumstance. The exact amounts of time that each subject participated were not available. For each subject, however, the

approximate amounts of tape recorded data were: Subject A, 2.25 hours; Subject B, 2.50 hours; Subject C, 3.50 hours; and Subject D, 2.00 hours.

The second data source used in this study consisted of written notes taken simultaneously with the video recordings. The notes used were taken by a non-participating observer, and were the work of this researcher. Observations were undirected in that the note-taker was not requested to attend to any particular aspect of the subjects' behavior. Twelve sets of written field notes were used in the analysis.

Collecting the Data

In an effort to clarify the ways in which the collection of data actually occurred, the following discussion of typical events and approaches is offered. First of all, prior to the arrival of any children, the observer and the camera person met at the pre-arranged location. Usually, some consultation took place with the classroom teacher at this point, as to the most appropriate spot within the room for the camera equipment to be set up. Sometimes furniture or other equipment in the room had to be moved slightly in order for cords to reach electrical outlets or to ensure the clearest possible views for camera and observer. The

aim, however, was always to be as unobtrusive as possible, and to avoid interfering with the children's freedom of movement or access to materials and play equipment. At this point as well, the research director might provide some information about the particular situation that day; one of the subjects would be late, or was ill, for example, or was attending with a grandparent rather than with the usual parent. The observer then needed to ensure that paper, pencil, clipboard, and a clock or watch were at hand. The positions chosen for observation were points from which one could see but would not actually be part of the action at the art centres. Materials and tools available on that particular date, and any unusual circumstances (a substitute teacher, a rearranged room, a special event) were then recorded.

The roles which the observer and the camera person were encouraged to take on during this project were those of friendly bystanders. Interacting too much with children could have influenced the interaction or caused the observer to miss events taking place elsewhere in the room. Nevertheless, both the observer and the camera person occasionally spoke with or helped children in situations when the teacher was momentarily

unavailable. Because interaction was not initiated with the children, however, both recorders were usually ignored. As noted in the initial description of the setting, adults with note pads and cameras were fairly common in the setting.

Upon the arrival of the designated subjects, work started. First, the time at which each subject arrived in the room was noted. The camera person would not ordinarily record events until one of the subjects actually arrived at an art station. Particularly if a subject took a long time before moving to an art activity, however, the notes might reflect what he or she was doing instead.

"10:10 - A working with puzzles";

"10:15 - A still at puzzles with _____"

were typical entries under these circumstances. Quite often a situation arose in which both subjects could be found at art centres at the same time. Two subjects might have positioned themselves on either side of the same easel, one visible and one not. In these circumstances, the camera person usually chose to alternate the focus from one, then another subject, for short periods. An attempt was made to attend to both subjects in the notes. Sometimes it was necessary to

move quietly closer to a subject in order to get a clearer view. With so many children in the room, both hearing and vision were often obscured. Nevertheless, the combination of approaches usually provided a coherent record of events.

As snack time arrived, the camera person and observer slipped out of the room. The tapes were labelled and stored in the centre's tape storage area. Some time at this stage was spent re-writing and clarifying the notes, which were then typed by the Centre's office staff.

Interpretation of Data

After repeated review of the video recordings and field notes, a procedure for analysis was developed. Categories were identified within which verifiable information could be compiled which related to the hypotheses, the research questions, and which would clarify experiences of the subjects. Data were then broken down into "episodes" for each subject, and each episode was examined for information related to the categories identified. Information was recorded on check sheets developed for the purpose. Results were presented in the form of tables and descriptive passages. Some descriptions were drawn directly from

the field notes; others were developed from notes and tapes together, and presented as a summarized recounting of events and behavior. An in-depth description of the data analysis is presented in the following chapter.

CHAPTER IV
ANALYSIS OF THE DATA

Introduction

The procedure for analyzing the data in this study evolved after an initial review of the tapes and notes. A challenge to the researcher was posed by the volume of data available. In addition, it was necessary to determine the kinds of information which could be drawn from the data, and, of that, which would be useful in discussing the hypotheses presented. Two steps were taken toward resolving these problems.

Compartmentalization of Video Recorded Data

In order to deal with the volume of data, the video recordings were scanned, and "episodes" of involvement were identified for each subject. An episode was considered to have taken place when a subject entered an art area, remained there to interact with materials, and indicated completion, either by comments or by leaving the area. Within each recording session, therefore, each subject's episodes were identified and numbered. Interactions were then more manageable to analyze and simpler to retrace within the data.

Development of Categories

The next step in extracting information from the videotaped data was to establish categories within which information, related to the hypotheses, could be identified. A review of the hypotheses and relevant literature prompted the following categories: "Immediate Presence of Others"; "Watching"; "Verbal Interaction"; "Imitation"; and "Distraction". Each of these related respectively to the first five hypotheses. For clarification, "Number of Episodes"; "Location of Activities" and "Activities" were also included. Dealing with the final hypothesis, however, (the relationship between interaction and the quality of the experience) was less straight forward, as no single factor could be used as evidence in this category. It was determined, therefore, to use several categories related to the final hypothesis in hopes that a pattern might emerge overall. The first categories chosen were "Length of Episodes" and "Play". Questions underlying these categories had to do with whether the length of an interaction or the more unconventional use of materials in pretend play might have implications for the quality of the experience. Each of the categories to this point was presented

quantitatively in the results. In an attempt to represent information missed by the original categories, the following were also identified: "Longest Episodes"; "Working Together"; "Adult Behavior"; "Other Child Behavior"; and "Additional Interactive Behavior". These final categories were presented descriptively in the results. They were intentionally overlapping in order that full descriptions were ensured for each subject; also, for discussion of the final hypothesis.

Collection of Data

At this point a check sheet was developed which reflected the organization and categories. As the video tapes were reviewed, sheets were completed for each episode. In addition, a brief written summary of the interaction in that episode was included on the back of the sheet. Field notes were used to clarify and supplement the tapes where necessary.

Presentation of Results

Quantitative results were compiled for each subject on total sheets, and presented in the form of tables. Descriptive results made use both of summaries from the video review and of direct quotations from the field notes. Chapter V includes a full presentation of the results.

CHAPTER V

RESULTS

Introduction

Results are presented for each subject under the following headings: Total number of Episodes Identified; Location of Activities; Activities; Immediate Presence of Others; Watching; Verbal Interaction; Imitation; Distraction; Length of Episodes; Play; Working Together; Adult Behavior; Other Child Behavior; Description of Longest Episodes; and Additional Notes on Interactive Behavior. Results were determined from the examination of video recordings and field notes. Descriptive passages represent summaries of episodes developed from reviews of tapes and notes. Direct excerpts from field notes are indicated by the use of quotation marks.

The headings, as noted in the Definition of Terms, refer to the following:

Total Number of Episodes Identified refers to the number of individual art encounters identified for a subject within the available data.

Location of Activities refers to the location within the setting at which the episode took place.

Activities refers to the type of interactions observed with the material or tool: use of material; manipulation of tool; sorting/organization of tool or material; watching; or "other."

Immediate Presence of Others refers to the presence of an adult or child within easy touching distance of the subject during an art encounter.

Watching refers to the activity of observing interaction with an art tool, material, or product.

Verbal Interaction refers to talking with or being talked to by an adult or child during an art episode.

Imitation refers to immediate copying of another's image or gesture within an art episode.

Distraction refers to looking away from the art activity to other activities in the room. Frequent distraction is defined as more than six instances of looking away or more than three instances of sustained (prolonged) looking away.

Length of Episodes refers to Long, Medium, or Brief. Brief episodes are less than 1 minute; long episodes are more than 10 minutes; medium episodes are any length in between.

Play with art materials includes a "pretend" component.

Working Together refers to two individuals working on the same surface or project at the same time.

Adult Behavior refers to the behavior of adults involved in episodes identified for subjects.

Description of Longest Episodes provides summaries of "Long" or (if no long episodes) "Medium" episodes within data for a given subject.

Other Child Behavior refers to the behavior of other children involved in episodes identified for subjects.

Additional Notes on Interactive Behavior refers to any further points about interactions which have not been included in previous categories.

SUMMARY OF RESULTS - ALL SUBJECTS

Table 1: Location of Activities

| Subject | A | B | C | D | TOTAL/% |
|--------------------|----|----|----|----|-------------|
| Number of Episodes | 41 | 32 | 37 | 27 | 137 |
| Clay Table | 2 | 2 | 14 | 10 | 28/20.437% |
| Easel | 19 | 9 | 11 | 5 | 44/32.1167% |
| Collage/Art Table | 10 | 17 | 7 | 10 | 44/32.1167% |
| Chalkboard | 2 | 3 | 2 | 2 | 9/6.569% |
| Pencil Sharpener | 1 | 0 | 1 | 0 | 2/1.459% |
| Other | 7 | 1 | 2 | 0 | 10/7.299% |

Table 2: Activities

| Subject | A | B | C | D | TOTAL/% |
|--------------------------|----|----|----|----|------------|
| Number of Episodes | 41 | 32 | 37 | 27 | 137 |
| Watching Only | 1 | 4 | 4 | 2 | 11/8.029% |
| Using Material/Tool | 24 | 22 | 28 | 21 | 95/69.343% |
| Manipulating Tool Only | 5 | 0 | 2 | 2 | 9/6.569% |
| Organizing Tool/Material | 7 | 2 | 2 | 0 | 11/8.029% |

Table 3: Immediate Presence of Others

| Subject | A | B | C | D | TOTAL/% |
|--------------------|----|----|----|----|------------|
| Number of Episodes | 41 | 32 | 37 | 27 | 137 |
| Yes | 23 | 26 | 26 | 22 | 97/70.802% |
| No | 18 | 6 | 11 | 5 | 40/29.197% |
| Adult | 10 | 10 | 6 | 6 | 32/23.357% |
| Child | 7 | 10 | 5 | 4 | 26/18.978% |
| Adult and Child | 6 | 6 | 15 | 12 | 39/28.467% |

Table 4: Watching

| Subject | A | B | C | D | TOTAL/% |
|--------------------|----|----|----|----|------------|
| Number of Episodes | 41 | 32 | 37 | 27 | 137 |
| Yes | 7 | 12 | 13 | 9 | 60/43.795% |
| No | 34 | 20 | 13 | 9 | 76/55.474% |
| Adult | 2 | 0 | 4 | 6 | 12/8.759% |
| Child | 4 | 11 | 12 | 7 | 34/24.817% |
| Adult and Child | 1 | 1 | 7 | 5 | 14/10.218% |

Table 5: Verbal Interaction

| Subject | A | B | C | D | TOTAL/% |
|--------------------|----|----|----|----|------------|
| Number of Episodes | 41 | 32 | 37 | 27 | 137 |
| Yes | 18 | 21 | 18 | 18 | 75/54.745% |
| No | 23 | 11 | 19 | 9 | 62/45.255% |
| Other to Subject | 15 | 17 | 15 | 13 | 60/43.795% |
| Adult | 15 | 16 | 12 | 9 | 52/37.956% |
| Child | 3 | 1 | 6 | 3 | 13/9.489% |
| Subject to Other | 12 | 20 | 6 | 14 | 52/37.956% |
| Adult | 13 | 17 | 5 | 9 | 44/32.116% |
| Child | 1 | 2 | 0 | 4 | 7/5.109% |
| Unclear | | 1 | 1 | 1 | 3/2.189% |

Table 6: Imitation

| Subject | A | B | C | D | TOTAL/% |
|--------------------|----|----|----|----|------------|
| Number of Episodes | 41 | 32 | 37 | 27 | 137 |
| Yes | 1 | 0 | 5 | 5 | 11/8.029% |
| No | 40 | 32 | 30 | 21 | 123/89.78% |
| Adult | 1 | 0 | 2 | 4 | 7/5.109% |
| Child | 0 | 0 | 2 | 1 | 3/2.189% |
| Uncertain | | | 1 | 1 | 2/1.459% |
| Adult and Child | | | 1 | | 1/0.729% |

Table 7: Distraction

| Subject | A | B | C | D | TOTAL/% |
|--------------------|----|----|----|----|------------|
| Number of Episodes | 41 | 32 | 37 | 27 | 137 |
| Yes | 13 | 12 | 32 | 18 | 75/54.74% |
| No | 28 | 20 | 5 | 5 | 61/44.525% |
| Frequent/Sustained | 1 | 2 | 16 | 10 | 29/21.167% |
| Unclear | | | | 1 | 1/.729% |

Results -- Subject A (see Appendix A)**Total Number of Episodes Identified:** 41**Location of Episodes** (Appendix A, Table A-1)

Subject A showed some preference for working at the easel, where 19 (46%) of his identified episodes took place. 10 episodes (24%) took place at the collage table, and 7 (17%) took place at "other" locations. Specifically, these were: 2 at a wall where paintings were being put up and taken down; 1 on the floor; 1 in the middle of the room; 2 at a table in the "housekeeping" area; and 1 at the slide. Two each of the remaining episodes took place at the clay table and the chalk board, and 1 episode took place at the pencil sharpener.

Activities (Appendix A, Table A-2)

24 (58%) of A's episodes involved at least some use of a material/tool. Seven episodes (17%) involved organizing materials/tools only; 5 episodes (12%) involved manipulating tools only, and 4 episodes (10%) involved "other" activities, specifically: hanging up a painting; taking down a painting; showing a tool to a parent; and talking about a painting.

Immediate Presence of Others (Appendix A, Table A-3)

23 (56%) of Subject A's episodes involved the immediate presence of another for all or part of the episode. Eighteen (44%) of the episodes found Subject A working alone. Of those involving others, 10 episodes (24%) involved adults; 7 (17%) involved children; and 6 episodes (15%) involved both adults and children.

Watching (Appendix A, Table A-4)

Thirty-four (83%) of Subject A's episodes involved no watching of another interacting with art materials. Seven episodes (17%) involved some watching. Of these, 4 episodes (10%) involved watching a child; 2 episodes (5%) involved watching an adult; and one involved watching both an adult and a child. The episodes in which adults were watched, however, concerned 2 instances of writing names on work and one of hanging up a painting.

Verbal Interaction (Appendix A, Table A-5)

Seventeen (41%) of the episodes identified for this subject involved some verbal exchange, while 24 (59%) did not. Of the episodes involving verbal exchange, at least 15 (37%) were noted in which a child spoke to the subject; 3 (7%) were noted in which a

child spoke to the subject; 13 (37%) in which the subject spoke to an adult; and 1 (2%) in which the subject spoke to a child.

With respect to the content of verbal interactions for this subject, 15 of the 18 episodes containing verbal interaction were judged to contain exchanges which were related to the art episode. Topics including talking about or asking for materials or tools; talking about the product; talking about hanging work up; indicating completion of work; and talking about clean-up. Two episodes which contained verbal interaction were unclear as to content, and one episode contained comments which were unrelated to the activity. The unrelated content involved the subject calling out the names of his teachers ("That's _____!" "That's _____") who were across the room at the time.

Imitation (Appendix A, Table A-6)

Only one instance (2%) of imitation could positively be identified for this subject. This took place during an episode in which an adult who was talking with and sitting beside the subject made a zigzag motion with her finger in the air above the subject's paper; he then immediately made a zigzag mark on his paper with a marker.

Distraction (Appendix A, Table A-7)

Thirteen of this subject's episodes (32%) involved at least one instance of distraction. No distraction was found in 28 (68%) of the episodes. Of the episodes involving distraction, however, only 1 (2%) could be characterized as a high or frequent amount of distraction. (This instance was one in which the subject was trying to figure out how the scissors worked, but was having difficulty; within a brief period, he looked up approximately 7 times (February 15, 1985).

Length of Episodes

Of the 41 episodes identified for this subject, 19 (46%) could be characterized as "brief"; 21 (51%) were "medium"; and one qualified as "long" according to the definitions noted. Of the "brief episodes, 12 (29%) were conducted alone, and 7 (17%) involved others. Of the "medium" episodes, 5 (12%) were conducted alone and 16 (39%) involved the presence of others. The one long episode (2%) involved the presence of others.

Play

None of the episodes identified for Subject A could be characterized as having a "play" component as defined.

Working Together

Four episodes (10%) were identified in which this subject worked together with another child: 2 took place at the easel, 1 at the chalkboard, and 1 when A worked with another child to put up his painting. At least 6 episodes were also identified, however, in which this subject drew or painted on top of another child's work, usually when the other child wasn't there.

Adult Behavior

In addition to the verbal exchanges noted (the most frequent behavior displayed in A's episodes), at least 6 episodes were identified in which adults assisted with organizing materials/tools; 4 in which paper was changed at the easel, 5 in which the subject's name was written on his paper by an adult; and one each in which an adult hung up work; cleaned up; and assisted with sleeves or an apron. One episode was identified (March 5, 1985) in which an adult used a material. This, however, was a case in which the adult used a crayon from the subject supply to write his name on his drawing.

Other Child Behavior

Other than the verbal exchanges, instances of working together, and incidents in which the subject marked on another child's work, no further evidence could be found in which other children's behavior affected this subject's art episodes.

Description of Longest Episodes

As noted previously, only one of A's episodes (November 30, 1984) could be characterized as "long." This was described in the notes as a "whirlwind but rather long episode" in which the subject painted on both sides of the easel, alternating back and forth, moving paint brushes from one side to the other, and brushes from the nearby art/collage table to the easel. Throughout the episode other children were present, and as A moved from one side of the easel to another, he stood beside different children. There were brief moments when A glanced at what the other children were doing -- he was, after all, working with them on the same sheet of paper -- but he seemed mainly concerned with organizing the tools. The other children spoke to A, but he did not respond.

Some of A's medium-length episodes, however, were actually a series of encounters with the same tool or

material, and could be interpreted as continuing one from another. The first of these occurred in the Fall of the second year, and involved in a session with scissors (October 16, 1985). A began with a very long rectangular piece of orange paper and a pair of scissors. He sat in the "housekeeping" area at a small table; another boy, engaged in the same activity was seated directly across from him. A snipped away at the paper, very absorbed, until it was snipped so small that he could no longer cut it. At this point, he decided he was finished. No interaction with others had taken place at all. At a later point, however, A returned to the table (starting a second episode), and, finding a second long paper on the shelf, began again to cut. No one was at the table at all this time. Because the paper was very long, it was difficult to cut. He stood up and spied his teacher across the room. Carrying scissors and paper along, he "bounced" over to her and stood behind her. At first she didn't notice him. He followed behind her and then, still standing, began to cut again. At this point he looked up at the teacher, smiling. She saw him and said, "You're using the scissors now!" A returned to his table and continued to cut. Then, waving a piece of

orange paper in the air, he "galloped" across the room to show the teacher his "product". He then returned again to his little table to cut. Finally, he stood once more and crossed the room with the much smaller piece of orange paper caught between the blades of the scissors. He stopped for a moment, holding the paper and scissors up to a mirror he was passing. As A walked by her, the teacher gave him a little hug and a smile.

A final example of A's longer episodes was actually composed of two which occurred back to back at the easel. The first began as A asked the teacher for the largest size brushes to paint with. The lids (which had holes in their tops to fit smaller paint brushes) were removed, and A carefully placed a larger size brush in each can. The teacher helped with this, then left as A began to paint. A worked, completely absorbed, using a variety of colours, and making quite deliberate strokes and shapes. After several minutes, he stood back from his painting, hands in pockets, gazing at it. He then called out pleasantly to the teacher, across the room, "I'm finished! I'm all done!" A pointed proudly to his work. The teacher responded with "Oh! Look at all the colours! Did you

use all the colours?" As she took the painting off the easel she commented, "You sure worked hard on that!"

Next A removed all the long brushes, handing them to the teacher. Together they replaced the lids with the small holes and replaced the small brushes as well. A decided on the kind of paper he would use and began to paint again. Even though the room was very noisy, he remained undisturbed, approaching the second painting with the same careful attention he gave the first. When finished, he called again cheerfully, "I'm all done!" The teacher rejoined him, responding enthusiastically to his work. A indicated that he would like to have both paintings hung up. The teacher then helped him take both paintings across the room to a wall where they could be hung. Getting some tape, the teacher first fixed one painting very high up on the wall; A watched. They decided, however, that it was too high, and the teacher lowered it to a height at which A could attach the painting to the wall himself. She helped him manage the tape and then moved away as another child moved in and began to help A hang his work.

Additional Notes on Interactive Behavior

It was the lack rather than the presence of human interaction that was notable in most of Subject A's episodes. Interaction that did occur was largely reserved for adults, and usually took place before or after (rather than during) material use. There is some evidence, especially during the first year, that A moved so quickly from activity to activity that he didn't really have time to interact with others. Notes from November 30, 1984, for example, reveal that, over a period of about 40 minutes, A visited the kitchen area, the water-play area, the library, the easel, the art table, the rabbit's den, and the chalk board. Some of the sequences go like this: A ran across the room to get a book, and gave it to the teacher. A then began to play with trucks, sitting close by her. He then played with the trucks on the "steps" and the slide. 5 minutes later A ran to the easel and began a sequence in which he painted on both sides of it. He then moved away from the easel, returned to it, and moved away again to watch a boy on the "ride-'em"-toy. He moved then to the kitchen. Five minutes later A moved to the art table. Reaching for clean brushes, he took an entire can of them to the painting easel.

Holding a brush in each fist, he dipped one in red, went around to the other side of the easel, and made two red streaks. With his other hand, he dipped a brush in blue. Then, wiping his hand on his clothing, he replaced the brushes, brush first, in the can. A then sat on a nearby "ride-'em"-toy, then ran into the rabbit area. Three minutes had elapsed since his arrival, noted earlier at the art table.

On February 15, 1985 the scene was similar. A began at the water-play table. One minute later he chose a "scale" to play with, and then played with trucks and blocks near there. Four minutes later he moved to the easel, chose a large, wide brush from a can of clean brushes, and made a single arched blue line on the paper. He replaced the brush in the blue paint container and dashed quickly away. Two minutes later he moved to the easel; the assistant teacher was there too. He chose a wide brush, and, with black paint, made a quick squiggle. He replaced the brush in the black paint can, looked up while another boy was painting, and dashed away. One minute after A arrived at the easel this last time he had moved to the slide, then to the puzzle area. Four minutes later he had moved to the piano, then to the records, and then

crossed the floor to his teacher and a researcher, who had a "game" for him to play. He sat down beside her and stayed to play the research "game". Six minutes later he crossed the room to the art table. He then moved to the easel, painted on someone else's painting with black paint, and waited for his teacher to remove that one. On the clean sheets he made very brisk strokes, and then heavy "pats" with the brush. He replaced the brush, splattered blue vigorously across the page, and returned the brush to the blue can. On the other side of the easel, he then splashed red on another girl's painting, thought for a moment about which can to return the brush to, and having done so, moved to the art table. There he chose several different pairs of scissors, and used paper and glue. He then left the room to wash his hands. When he returned, he jumped on a "ride-'em"-toy. (Nine minutes had elapsed since he painted red on the girl's painting.) Two minutes later, he was at the blocks; 4 minutes later he arrived at the clay table, where he dabbled at something and then moved on to the slide. Two minutes later he was observed "prancing" around the room, causing a girl's shoulder to get hurt. Then he sat in the rocking boat, moved to the clay table, and

then to the art table. There he picked up a handful of brushes at the easel, whacked a paint-filled brush on the paper, stroked broadly across the top of the page, and moved back to the art table. There he returned some pastels to their box, and then called out the names of his teachers. "That's (teacher's name)! That's (assistant teacher's name)!" He moved to the clay table, and then to the art table. He watched, then walked around the table and began to look inside the supply cupboards, peeking in each. He chose a slender brush and put it in his mouth. Moving to the slide, he then "painted" the slide with the empty brush, and lodged its handle into a slot near the top. Then putting the brush back into this mouth, he stood on top of the slide. Eventually A returned the brush to the supply cupboards.

The session was finished -- about 45 minutes had passed since A was first noticed at the water-play table. These descriptions are typical of A's experiences in the first year, and like examples of this kind abound in the notes.

Results -- Subject B (See Appendix B)**Total Number of Episodes Identified:** 32**Location of Episodes** (Appendix B, Table B-1)

B showed a preference for the collage table and for the easel, which together totalled 26 (81%) of the identified episodes. Seventeen episodes (53%) took place at the collage table; 9 (28%) at the chalk board; and 2 (6%) at the clay table. One of this subject's identified episodes took place in an "other" area, the housekeeping station.

Activity (Appendix B, Table B-2)

Of the 32 episodes identified for B, 22 (69%) involved using a material or tool, while 4 (13%) involved solely watching another interact with materials. Two (6%) involved only organizing or sorting a material/tool; and 4 (13%) involved an "other" activity, specifically choosing a material but not using it; peeling the paper off crayons (2), and making a "squiggled" pencil mark on a completed painting, possibly a way of "writing" her name on it. No episodes solely involved tool manipulation.

Immediate Presence of Others (Appendix B, Table B-3)

Twenty-six (81%) of the 32 episodes involved the immediate presence of an "other" for all or part of

their durations. In 6 episodes (19%), B worked entirely alone. In 10 episodes (31%) the "other" was an adult; in 10 episodes (31%) the "other" was a child; and in 6 (19%) both an adult and a child were present.

Watching (Appendix B, Table B-4)

Of Subject B's 32 episodes, 12 (38%) included at least one instance of watching another interact with materials while 20 (63%) involved no watching. As noted previously, 4 episodes (13%) were solely concerned with watching; 11 (34%) involved watching a child; 1 (3%) involved watching both a child and an adult; and no episodes involved solely watching an adult interact with materials.

Verbal Interaction (Appendix B, Table B-5)

With respect to verbal interaction during this subject's art episodes, 21 (66%) involved some verbal exchange, while 11 (34%) did not. At least 16 episodes (50%) were noted in which an adult spoke to the subject; 1 (3%) in which a child spoke to an adult; and 2 (5%) in which the subject spoke to a child.

With respect to content of verbal interactions for this subject, 19 of the 21 episodes containing verbal interactions were judged to contain exchanges which were related to the art episode. Topics included

talking about or asking for tools or materials; talking about the product; making statements about intentions ("I want to colour") or indicating completion; inviting another to work, too; comments on what others were doing with art materials; calling the teacher to come and see the work; and clean-up. Two episodes which contained verbal exchanges were unclear as to content.

Imitation (Appendix B, Table B-6)

There is no clear evidence of imitation within episodes identified for Subject B. One instance was noted in which the subject chose to use scissors immediately after another child used them, but whether or not imitation occurred was unclear.

Distraction (Appendix B, Table B-7)

Twelve (38%) of Subject B's episodes contained at least one instance of distraction while 20 (63%) contained none. Of the 13 episodes involving distraction, only 2 (6%) could be characterized as containing frequent or sustained distraction. Both of these took place at the collage table.

Length of Episodes

Concerning the lengths of this subject's art episodes, 10 (31%) could be characterized a "brief" or fleeting; 18 (56%) were "medium", and 4 (13%) were

long. Of the brief episodes, 4 (13%) were conducted alone, while 6 (19%) involved the presence of another. Of the episodes which were medium in length, 3 (9%) were conducted alone while 15 (47%) involved the presence of another. All of the long episodes involved the presence of another.

Play

None of the episodes identified for Subject B could be characterized as having "play" component as defined.

Working Together

At least 4 episodes (13%) were identified for Subject B in which she worked together with another child on the same surface. Two of these took place at the chalk board, and one each at the easel and the collage table.

Adult Behavior

In addition to verbal exchanges noted previously within B's episodes, a number of additional adult behaviors were identified. These included at least 7 instances in which the adult assisted with getting or organizing tools; 2 in which the adult changed the paper on the easel; 6 in which the adult wrote the subject's name on her paper; 2 in which the adult hung

up the subject's work; 4 in which the adult cleaned up; and 2 in which the adult assisted with rolling up sleeves or putting on aprons. Two episodes were noted in which the adult used the material. Involving 3 instances in all, each use was at the subject's request. In 2 episodes the subject was gently "restrained from leaving an art area by a parent who wanted her to clean up before leaving.

Other Child Behavior

In addition to verbal exchanges and those instances in which the subject worked together with another child on a surface, one instance was noted in which the subject was more or less pushed away from the easel by another child who wanted to work there, too. In another instance, the subject invited a child to leave the play-dough table with her when it was apparent that another boy was using all the dough.

Description of Longest Episodes

Four of this subject's episodes were characterized as "long". Each of these was also highly interactive in nature. The first (January 25, 1985) is one in which B worked for an extended period at the easel, unquestionably absorbed in her work. Nevertheless, this was an episode in which she worked side by side

with another child and also made several invitations to the teacher to share her work. It began as B stood initially at the easel, speaking with her teacher. Another child (actually Subject A) joined them. Taking a brush from B's side of the easel, A shook paint onto B's paper -- or onto where she seemed about to paint. B made no comment, but watched A's actions. The teacher now spoke with A, wrote his name on the paper, and then removed it from the easel. Then B began to paint and A watched her. A then stepped forward and began to paint again; they painted side by side for a short while. B's mother came to say good-bye, but B hardly noticed. A left, but B took no notice of this either. She continued to work, painting on top of the section A had already painted. Smiling, she turned from her work and crossed the room to stand near the teacher. After a moment, the teacher noticed her and returned with B to the easel. There they talked and pointed to different parts of the work. The teacher wrote the names of A and B on the paper, and B began to paint once more. Highly involved, B painted alone for a while. As she stopped, she called out, "I did it! I did it!" Running across the room to get her teacher, B brought her back again, talking about and pointing to

what she had done. B resumed painting; the teacher moved away. After an extended time, however, B again called out "I did ... look at my picture!" She ran again to the teacher who returned once more to the easel with B. "Are you finished?" asked the teacher. B began to paint again. When she stopped, the teacher returned for more talk and encouragement. One final time B began to paint. At last she walked away from her work.

In watching this episode, one got the sense that B was genuinely interested in and enjoying her painting. Regularly dashing off to get the teacher, however, became incorporated into the activity, and seemed to give her renewed energy each time to continue her work.

A second episode (March 22, 1985) was a very lengthy session characterized by many, many exchanges between B and a visiting researcher. B sat beside him happily drizzling glue and choosing colorful paper shapes to press atop it. B spoke frequently to the visitor, and he responded nearly every time. A shortened version of the episode went like this:

B to R (researcher) as she drizzled glue on her paper. "Look at those lines!"

R:Look at those lines, yes. Look what you can do!" (B makes drizzled lines all over the paper). "I think you're making a very interesting design!" (B continues to work, placing her shapes of coloured paper quite deliberately on the glue.

B:(Drizzling again). "I'm doing wiggly lines!"

R:"I can see what you're making."

B:"Triangle!" (She places a piece of triangle paper).

"Square!" (She places a square piece).

R:"Do you know exactly what you need?"

B:"I'm going to show (my teacher)."

B left to find the teacher. When she returned, B started a new drizzled glue piece. As she began, the researcher stood and crossed the room to speak with the teacher. B picked up a pencil with her left hand, but holding it at its tip, the point barely touched the paper. She dropped it to the table. With the researcher gone, she looked disinterested. She then ran away to the "kitchen" area.

Two final "long" episodes occurred on April 14, 1985. Both of these also involved B's visiting

"friend" from the previous session, and were of the same nature. The first of these again included many verbal exchanges, and B ensured the visitor's attention by commenting, "Look!" and pointed to her work. When a boy across the table began to use scissors, B also decided to try. The researcher used scissors as well, and B watched him, but did not alter her rather awkward style as a result. The researcher also assisted with organizing tools, pouring glue, etc. As the episode finished, he asked B what he should write about her work (he was about to write something on her paper), but she did not answer. She dashed away from the table.

Within a very short time, B returned with a 3-dimensional puzzle, obviously intended to share with her friend. When he did not respond to the puzzle, however, B began again to drizzle glue. She also turned again to the scissors and began to cut. She handed a folded piece of paper to her friend, and told him to cut a rectangle, which he did. B had some difficulty with her scissors; however, with the researcher's assistance, she finally managed a long cut down the centre of the rectangle provided. The cut made, B announced that she had made "pants". The

episode continued as the "pants" were fringed all round with the scissors, and later cut right in half. At this point B handed the paper again to the researcher and instructed him to cut a "worm". The episode wound down from this point. It was apparent that the presence of the visitor in all three episodes had been a source of joy for B.

Additional Notes on Interactive Behavior -- Subject B

In addition to the behaviors already presented, a number of other examples revealed an interest on B's part in interaction during art episodes. In an episode (November 2, 1984), B had engaged in an ongoing verbal exchange with her mother while drawing. When B decided to leave, she tried to pull her mother with her. Later that same day, B was seen to hold her mother's hand tightly and pull her into the art area again. (These were also the two instances when B's mother gently restrained her in order to get her to clean up.)

On November 30, 1984 B indicated a preference for working beside her mother by attempting -- unsuccessfully -- to set up a work space on a small stool beside her. The stool was somewhat nearer her mother (who sat on the floor) than was the art table. The stool, unfortunately, proved too small to work on.

On December 14, 1984 B was seen to take the assistant's hand as she entered an art area. Within this same session, B called out to her teacher, crossing the floor as she did, and retrieved her to look at a painting. Later, on Dec. 14 again, B seated herself beside a staff person who was sitting at the art table with many children. She told him that she was "only going to watch".

On March 22, 1985 B used oil pastels, trying one, then another on the page. "Watch Me!" she said to her teacher, who responded with, "I see your picture!" Then the teacher asked B to name the colours she had used. B did so with great enthusiasm. "Brown! Green! Orange! Red!" Later that same day, B painted at the easel. When her first painting was finished, B asked the teacher to write her name on it and take it away. After a second painting, the teacher responded to B's indication that she wanted attention to her work: "I see your painting!" said the teacher. "You've made lots of straight lines!"

In a final example (February 15, 1985) B was seen to follow her teacher from the collage table, to the clay table, and back to the collage table again. Not until the third stop did she begin to use materials,

and then worked in a very uninvolved way. She appeared more interested in the adult's companionship, in this case, than she did in the materials.

Results -- Subject C

Total Number of Episodes Identified: 37

Location of Episodes (Appendix C, Table C-1)

Subject C showed a preference for the clay/dough table and for the easel, together comprising 68% of his total identified episodes. Fourteen episodes (38%) took place at the clay-dough table; 11 episodes (30%) took place at the easel; 7 episodes (19%) took place at the chalk board; 1 episode (3%) took place at the pencil sharpener; and 2 episodes (5%) took place at "other" locations. (One "other" episode was a "roving" one in which C moved around the room carrying a pair of scissors; the second took place on the floor.)

Activities (Appendix C, Table C-2)

Twenty-eight of Subject C's episodes (76%) involved the use of a material/tool. Four episodes (11%) involved solely watching another interact with a material/tool. Two episodes each (5%) of manipulating and organizing tools/materials were also identified. One episode (3%) was categorized as an "other" activity; this involved talking with the teacher about another child's painting.

Immediate Presence of Others (Appendix C, Table C-3)

Twenty-six episodes (70%) identified for Subject C involved the immediate presence of others during all or part of the encounter. In 11 episodes (30%), the subject worked entirely alone. Of those episodes involving others, 6 (16%) involved interactions with adults; 5 (14%) involved interactions with other children; and 15 (41%) involved exchanges with both adults and children.

Watching (Appendix C, Table C-4)

Instances of watching others interact with materials/tools were identified in 23 episodes (62%) involving Subject C. Thirteen episodes (35%) involving no watching. Of these episodes in which watching occurred, adults were watched 4 times (11%); children were watched in 12 episodes (32%); and 7 episodes (19%) involved watching of both adults and children. In 1 episode it was unclear whether the subject was watching or simply distracted.

Verbal Interaction (Appendix C, Table C-5)

Eighteen episodes (49%) identified for Subject C involved at least one instance of verbal interaction. Nineteen episodes (51%) involved none. Of these involving verbal exchange, 12 (32%) were noted in which

an adult spoke to the subject; 6 (16%) in which a child spoke to the subject; 5 (14%) in which the subject spoke to an adult; and none in which the subject spoke to a child.

With respect to content of verbal interactions for this subject, 15 of the 18 episodes containing verbal interactions were judged to contain exchanges which were related to the art episode. Topics included other children telling the subject that he couldn't joint in or use a tool; other children commenting on the colours ("This is red!"); talk about tools and materials; talk about what the teacher was making; a "play" exchange about eating clay "cookies"; a warning not to paint on a chair; and clean-up. Two episodes containing verbal exchanges were unclear as to content. In one episode the teacher suggested substituting a ball for some clay that had been tossed in the air.

Imitation (Appendix C, Table C-6)

5 episodes (14%) were judged to include imitation during Subject C's art encounters. These took place on November 5, 1984; November 26, 1984; February 18, 1985; March 6, 1986; and April 24, 1986. They included instances in which C appeared to imitate Subject D as she moved back and forth around the easel to see C's

work; an assistant teacher showed C how to use the clay roller and he did so; C used the rolling pin again after watching the assistant use it; C pressed pieces of styrofoam into his clay after watching other children do it; and C imitated an adult who was peeking through a piece of colored cellophane. (These instances are further detailed in the descriptive passages to follow.)

Distraction (Appendix C, Table C-7)

Thirty-two of Subject C's episodes (86%) involved at least one instance of distraction. Of these, 16 episodes (43%) were judged to involve frequent or sustained distraction. Five episodes (14%) involved no distraction.

Length of Episodes

Twenty-eight (76%) of Subject C's episodes were "medium" in length; 9 episodes (24%) were "long". Of the medium-length episodes, 10 (27%) took place alone, and 18 (49%) took place in the presence of others. Of the 18, 6 episodes (16%) involved an adult; 5 episodes (14%) involved a child; and 7 episodes (19%) involved both an adult and a child. Of the "long" episodes, 1 took place when the subject worked alone (April 22, 1985) at the easel, and the remainder took place in the

presence of others. One of these involved an adult only, and 7 involved both an adult and a child.

Play

One instance of "play" according to this study's definition was identified among Subject C's episodes. This occurred on March 18, 1985 and involved a sequence in which C and his teacher pretended to eat clay "cookies". (This episode is detailed under Description of Longest Episodes.)

Working Together

Instances in which Subject C shared a project or surface with another occurred in episodes on the following dates: November 5, 1984 (easel), 2 episodes; and November 26, 84 (easel), 1 episode.

Adult Behavior

As with other subjects, the most frequent adult behavior identified within C's episodes was verbal interaction. Also at least 6 instances were identified in which an adult assisted with organizing materials/tools. At least 8 (22%) of Subject D's episodes involved adults using/manipulating clay; at least 1 instance was identified in which an adult demonstrated the use of a rolling pin on the clay; 1 instance was also noted in which an adult talked about

and looked through a piece of coloured cellophane, but did not actually "use" the material to make a hat (which was what the children were doing).

Description of Longest Episodes

Long episodes were identified for Subject C on November 5, 1984 (1 episode); November 26, 1984 (2 episodes); February 18, 1985 (1 episode); March 18, 1985 (1 episode); April 22, 1985 (2 episodes); March 6, 1986 (1 episode); and April 24, 1986 (1 episode).

The first of C's long episodes occurred on November 5, 1984 at the easel. Here he entered the easel area when another child was already working there. After watching the other child work, C began to paint as well, joining the child on the same surface. At first the other child resisted, snatching C's paint brush away and telling C that he couldn't paint there. C ignored the comment, however, and the other child acquiesced, announcing to others that, "We're painting!". The two worked together on the same side of the easel until the other child left. At that point, a teacher approached C, asking if he would now like a new paper. As C agreed, a new episode was initiated, and he continued then to work on his own.

On November 26, 1984, two long episodes were noted for C. The first of these began at the clay table, where C was working alone. He held and patted the clay, but very frequently looked away from his work at the other children, especially those at the adjacent water-play table. In fact, he rarely actually looked at his own work, rolling and squeezing the clay while watching others. Eventually he turned completely away from the table, still holding his clay, and just stared at the other children. At this point he was joined by an adult, the assistant teacher; C immediately turned back to the table. C continued to be rather frequently distracted, but his focus on the clay increased as the assistant teacher began to work on the clay. She rolled coils (which she called "snakes") and talked to C about the clay. Watching her, C also attempted to roll the clay on the table as she did. Then another child joined them at the house and began to work. C also watched this boy use the clay. The boy spoke to C. C then took a coil rolled by the teacher and placed it on his own work space. As the other boy moved away to the water table, C also took a piece of clay that the boy had been using and moved it for his own use. Having glanced at the water table frequently throughout

the episode, C finally moved there. It seemed that the final stimulus to leave was the decision of the other boy to move to the water table.

A second long episode identified on this date for C took place as he returned to the clay table after working at the water station. Again, he began by working alone, and his work involved frequent glancing up and sustained looking away, though somewhat less than in the first episode described. The same teacher again joined C at the table, and C again turned his attention back to the table and the material. The teacher began to make, she said, a "dragon" with her clay. The boy who had worked with C before rejoined the two, saying, "I'm making a dragon, too!". C watched his teacher make the dragon for a time. There was some confusion and distraction involved then as other children joined this group. C gently touched the teacher's dragon, but did not attempt to make one himself. The first boy added on to the teacher's dragon. The teacher then moved away and C tended to look away from the clay centre more frequently again. The conclusion was not shown on the tape, but C could be seen crossing the room to visit the teacher who had worked beside him.

The long episode identified on February 18, 1985 also took place at the clay table. The assistant teacher, the boy in the previous episode, and two other children were also working at the clay centre. C began to work on another boy's (P) clay piece. P pulled it away, and the assistant teacher led C back to his own work. She demonstrated rolling the rolling pin on the clay and C imitated. Another boy (M) used a butter knife on his clay. C snatched the knife the moment it left M's hand. M tried to take it back and the two moved all the way round the table, C trying to keep the knife and M trying to retrieve it. C finally won out and M got another knife from the kitchen-play area. They worked together for a while until C left, moving off to the kitchen area. Notes revealed that although C was absorbed in his work during this episode, he continued, as in past episodes, to look away frequently from the clay.

The long episode noted on March 18, 1985 again took place at the clay table. Here C worked with his regular teacher; notes point out that he seemed less distracted than he had in earlier episodes on that date. He looked at his teacher and her work -- she patted and rolled the clay in her hands -- but then

looked away for an extended period, smiling at the children behind him who were playing on the rocking boat. A child began to cry then, which also absorbed C's attention. He turned back to the clay, pressing and flattening it, then turned away again at the sound of laughter in another part of the room. The teacher had left the table for the moment. As she returned, C turned back to his work, but looked around again at the playing children on the rocking boat and at a departing father. Suddenly, he offered the teacher a flattened piece of clay.

Teacher: "What should I do with it? Eat it?"

C smiles as the teacher pretends to eat the piece of clay.

Teacher: "What kind is it?"

C: "A cookie. A big cookie."

Teacher: "Oatmeal? Chocolate Chip? Sugar?"

C: "NO ... no ... no ..." (smiling).

Teacher: "What kind is it?"

C: "A big cookie!"

Teacher: "Delicious!"

C pretended enthusiastically to chew the cookie. This episode went on for some time, as C continued to work and pinch the clay. The teacher remained at the table

talking with C, reminding him not to really eat the clay, which was, she said, a "special kind of dirt." At one point the teacher left the table to assist another boy who had spilled sand on the floor. C ran over with her. When she left the room momentarily, he rushed to the door. "Here I am!" she said to C as she returned. As they both returned to the clay table, C (smiling) spoke to the teacher: "Want to play! You play, too! I want to play it again!"

Receiving a slightly less enthusiastic response this time (clean-up time was near), C picked up a large piece of clay from the bin beside the table, and let it fall to the floor. Then, breaking off a smaller piece, he tossed it up in the air. At this point, the teacher asked if C would like to have a ball to play with; smiling, he agreed. Holding the yellow foam ball, C pressed it into a piece of clay, and then threw the ball up in the air. The ball attracted two other children, who were laughing and acting silly. The episode ended as the three children went off to wash their hands in preparation for snack time.

The first long episode noted for Subject C on April 22, 1985 took place at the art table. Here he used glue and collage materials, working alone for most

of the episode. His work was characterized by frequent looking up. Using scissors on the glue piece, C seemed to finish his cutting and carried his work across the room to show his teacher. She commented, "It seems you've been really busy there!" At this point, he returned to the table to continue cutting. He snipped with one, than another pair of scissors. Wiping his hands, he left the area.

The second longer episode on that date took place at the easel, where C began by sorting paint brushes, ensuring that one was placed in each can of paint along the easel shelf. He made a few strokes on the paper, and then poked the brushes up and down in the cans. He seemed to pay careful attention to his work. Just as he seemed to finish, (having wiped his hands) the teacher approached. She spoke to C about his work, pointing out different parts of his painting. C then began to paint again, pointing enthusiastically to his painting as the teacher stood by. The teacher moved away from the area to get paper towels to wipe up a dribble of paint fallen on a nearby chair. As she exited she cautioned C not to paint the chair. C immediately painted a line on the chair. Upon her return, the teacher wrote C's name on his easel

painting. C painted another stroke on the chair. Noticing this turn of events, the teacher said, "Here's some more paper!" C painted again on the chair, now with enthusiasm. The teacher brought a big bucket of soapy water and a fat sponge, briefly demonstrating how to clean the chair. The episode ended with C contentedly soaping the painted chair. The washing and painting tasks seemed to interest him equally.

Another long episode (on March 6, 1986) involving Subject C began as he joined a teacher and a group of children who were making play dough. After each child got a turn at stirring and kneading the blue-coloured dough, they all moved off to a second table to use it. C patted his dough down flat, but looked away from his work frequently, watching the other children. Two girls who sat near him pressed styrofoam chips into their dough. C watched this as well. He then began to work the dough more vigorously, with both hands, squeezing and pressing. He continued to look away from his work, however, and eventually turned completely around in his seat so he could squeeze the dough and watch children at the other centres at the same time. As an assistant teacher approached, C offered her a lump of dough to feel. She gave it a pinch and handed

it back again. He continued to work, but soon moved back to the first table, where a red batch of clay was now being prepared, under the teacher's direction. Then it was back to the work table, surrounded by other children, to try out the new dough. C began to work, but continued to look up frequently, often watching other children work. A moment of conflict occurred when another boy attempted to grab a rolling pin promised (by the teacher) to C. The teacher held the rolling pin out of the other boy's reach, explaining that C had asked for it before. As things settled, C began to press pieces of styrofoam into his dough, as he had seen the girls doing earlier. Finally, he picked up a flattened piece of dough and carried it across the room. This had been a rather noisy, crowded episode.

A final long episode noted for C occurred on April 24, 1986 as children worked to make hats from scraps and coloured cellophane. A visiting mother was nearby, helping. C seemed absorbed in his work. Glancing up, he tried on his hat, and reached to feel his hair which was now encircled by the band of the hat. The parent, (not his) smoothed his hair and helped to press a piece of cellophane into place. C

peeked through the coloured cellophane; the adult watched closely. C continued to work, watching a boy beside him and talking with the adult. He tried on his hat again and turned to the adult, who was smiling at him. C then moved around the table to get a stapler. He examined it closely, opening and closing it, before added more paper to his hat. The adult continued to watch closely, but did not make a hat of her own. The teacher then approached the table and asked if the children there had tried looking through the cellophane. At this, C peered through the transparent colours again, as did the adult helper and the other boy. The three spent some time at this, also discovering the effects of more than one colour overlapped. The boy and C looked at one another through the cellophane, smiling and laughing. C carried his piece of cellophane around the other side of the table to show the assistant teacher. Eventually he wandered off across the room, still holding a pair of scissors he had used in his hat-making.

Results -- Subject D**Total Episodes Identified:** 27**Location of Activities** (Appendix D, Table D-1)

Subject D worked predominately at the clay/dough table and at the art/collage table, which together comprised 74% of the episode locations. Ten episodes (37%) took place at the clay/dough table; 10 episodes (37%) took place at the easel; and 2 episodes (7%) took place at the chalkboard. No episodes took place at the pencil sharpener or at "other" locations.

Activities (Appendix D, Table D-2)

Two (7%) of Subject D's episodes were composed solely of watching another interact with materials/tools. Twenty-one episodes (78%) involved material/tool use; 2 episodes (7%) involved only tool manipulation (scissors); and one episode involved an "other" activity -- peeling paper wrapping from pencil tips. One additional episode contained mainly watching, but also included a minimal amount of material use, so was placed in the "other" category.

Immediate Presence of Others (Appendix D, Table D-3)

Twenty-two episodes (81%) defined for Subject D involved the immediate presence of another for all or part of the episode. In 5 episodes (19%), D worked

entirely alone. Of the episodes involving the presence of others, 6 (22%) involved adults only; 4 (15%) involved children only; and 12 (44%) involved both adults and children.

Watching (Appendix D, Table D-4)

Eighteen episodes (67%) were identified in which Subject D watched others interact with tools/materials. Nine episodes (33%) involved no watching. In 6 episodes (22%) D watched an adult use a tool or material; and in 5 episodes (19%) both adults and children were watched; and in 7 episodes 26% a child only was watched.

Verbal Interaction (Appendix D, Table D-5)

Verbal exchange took place in 18 (67%) of Subject D's episodes; in 9 episodes (33%) no verbal exchange occurred. Of the episodes in which verbal interaction occurred, 9 (33%) were noted in which an adult spoke to the subject; 3 (11%) in which a child spoke to the subject; 9 (33%) in which the subject spoke to an adult; and 4 (15%) in which the subject spoke to a child. One episode was noted in which the subject seemed to be speaking to herself!

With respect to content of verbal interactions for this subject, 13 of the 18 episodes containing verbal

interactions were judged to contain exchanges which were related to the art episode. Topics included inviting another to work, too; talk about the fact that the paint was different from the kind of home, but that it was okay to touch it; talk about or request for tools or materials; talk about the subject being "good" at making something; another child stating that he was already working at a location, thus causing the subject to move away; talk about sharing a brush; asking if an activity was "hard"; talk about the product; and clean-up. Three episodes contained verbal exchanges which were unclear; 2 episodes contained exchanges which seemed unrelated to the art episode. One of these occurred when the subject played and laughed with a friend while they painted side-by-side. The play, however, seemed unrelated to the work. The second episode occurred when the only exchange was the mother stopping to say good-bye to the subject.

Imitation (Appendix D, Table D-6)

Imitation was judged to have taken place in 5 (19%) of the episodes defined for Subject D. No imitation was evident in 21 (78%) of the episodes, and one episode (4%) was unclear. Of the 5 episodes in which imitation occurred, 4 involved the imitation of

an adult while one involved the imitation of a child. The instances of imitation involved copying a circular shape drawing on the chalk board by her mother (November 5, 1984); using glue in the same way after watching a child use it (December 10, 1984); reproducing two dabs of paint made by the assistant teacher on the subject's paper (December 10, 1984); using a rolling pin immediately after watching the assistant use it (February 18, 1985); and finally, altering the way in which she was applying glue and glitter to a pine cone after watching an assistant teacher apply it (December 11, 1985). A particularly strong example, in this last instance the subject first applied glue to the newspaper covering the table, sprinkled it with glitter, and then rolled the pine cone in the glittering puddle produced. The assistant teacher sat quietly down at the end of the table and, noticing D's activity, began deftly to brush glue on the tips of the pine cone with a glue brush and then to sprinkle the glitter over top. D, watching, immediately changed her method.

Distraction (Appendix D, Table D-7)

Distraction was evident in 18 episodes (67%) identified for this subject. No distraction was

evident in 8 episodes (30%), and 1 episode was too difficult to assess. In 10 episodes (37%), the distraction was judged to be frequent or sustained. Of these episodes in which frequent or sustained distraction occurred, 2 took place at the easel; 3 took place at the collage table; and 4 took place at the clay table.

Length of Episodes

With respect to the length of episodes in which D was involved, 1 episode was judged to be "long"; 21 episodes were considered medium; and 5 episodes were "brief". The long episode (November 5, 1984), involved the presence of both an adult and a child. Of the "medium" length episodes, 2 were conducted alone; 6 involved the presence of an adult; 3 involved the presence of a child; and 10 involved the presence of both adults and children. Of the brief episodes, 3 were conducted alone, and one each was conducted in the presence of a child and an adult.

Play

No instances of "play" as defined occurred among this subject's art episodes. One instance was recorded (January 21, 1985), however, in which this subject watched a boy make a clay "fly" like an airplane,

adding a zooming sound effect. (An instance is also described in Additional Interactive Behavior which seems to involve play-like interaction, but does not have a fantasy or pretend component associated with the art material.)

Working Together

Subject D worked side-by-side at the easel with the same boy on two occasions: February 18, 1985 and November 13, 1985.

Adult Behavior

The most frequent adult behavior observed during episodes involving Subject D were verbal interactions. AS well, at least 4 instances were noted in which the adult assisted with getting and organizing tools/materials; and 1 each in which adults changed easel paper, wrote the subject's name, and hung up work. In 2 episodes the adult cleaned up; in 4 the adult assisted with rolling up sleeves or putting on aprons; and in 7 episodes an adult used a material/tool. In one episode the adult took part in an "other" activity: peeling paper from pencils. The episodes in which adults used materials involved one in which D's mother used chalk on the chalkboard at D's request; 3 in which D's mother used clay, rolling

little balls and then handing them back to D (again, at D's request); 1 in which the assistant teacher pained two quick dabs onto D's easel paper just before D started; 1 in which the teacher used the clay, patting and squeezing it; and 1 in which the assistant painted glue and sprinkled glitter on pine cones. As noted previously, 4 of these episodes involved imitation.

Other Child Behavior

In one episode (December 10, 1984), a boy "snarled" at D as she approached the easel. "I'm doing it!" he said. D then left. (note: Additional child behaviors are discussed under Additional Interactive Notes.)

Description of Longest Episodes

Among Subject D's longest episodes was one which occurred on November 5, 1984. It begins as she approached the easel with her mother. She stood for some time watching Subject C as he painted. D commented to her mother: "He painting!" as she pointed to his work. D indicated that she would like to paint as well. Her mother assisted her with this task, helping her to set up on the opposite side of the easel from C. Having now attempted a stroke on the paper, D reached out her finger to it, obviously yearning to

touch the wet paint. Her mother explained to her that "It's not finger paint," which was apparently the kind she had used at home. She pulled back her hand, but reaches out again. The tip of her finger was less than an inch from the wet paint. Passing by at this moment, the teacher commented, "I think you would like to touch that!", and indicated that it would be okay. D did so immediately. Then she began to paint with the brush, but soon peeked around the corner of the easel at what C was doing. As she returned to her side, C then peeked round at D. D commented about C's painting; her mother responded with, "Yes, it's a lovely painting, too!" Hearing another child crying, D stopped painting for a moment. C, having left the easel now for the rabbit area, returned to watch D paint. C started to paint again on the other side of the easel. D went round again to inspect, then to her side for more painting. She then continued her work on her own side, but frequently peeked out to see what else might be going on in other parts of the room. The episode wound down as D mentioned "outside" (one of the upcoming activities) to her mother, and the teacher pointed out that "It's time to go and wash up." The teacher also commented on D's work: "Look at all the colours you've

put on!" D's mother told D that there was not enough time to start another painting, though it seemed now that D might like to.

A second longer episode (though slightly less than 10 minutes, and therefore not categorized as "long") occurred on December 10, 1984. It began as D ran to the painting easel and watched the assistant teacher and another child. They were talking about making tigers. The assistant remarked that D "has come to help us! I think she is very good at making tigers! Are you?" "Yep," replies D. The assistant helped D put on her smock. D then watched the assistant make two quick dabs of paint on the paper with a brush. Immediately D poked the paint brush into the can and jabbed two short strokes onto the paper. Noticing some paint on her right hand, she began next to paint with her left hand. Stopping for a moment, she turned away from her work to watch first a boy near her, then the assistant teacher, then the camera, then two boys on the rocking boat. As she stood watching others, her teacher approached. "Are you finished?" "Yeah." As the teacher took the paper from the easel, C stroked her fingers through the wet paint on her painting. Teacher: "Where shall I put it? On wall?" D points.

"Put on the wall." The teacher and C then left together to wash C's hands.

Additional Interactive Notes

Several final episodes involving Subject D illustrate a characteristic which has not yet been fully dealt with. The first of these occurred on February 18, 1985 and began as D moved to the easel. Simultaneously, Subject C moved to the other side of the easel. They each began. D first spoke with the teacher, who explained that all the brushes were in the can at the end of the tray that day (rather than one per paint can as in the past). D put the brushes into the cans as she named the colors, not just down the row. As she did this another boy joined her. When he told her to put the "blue" brush into the "black" can, she thought for several seconds before doing it. The boy and D began to work together on the same page; they handed brushes to each other and spoke rather frequently. D made large circular strokes with the blue, then yellow, then dabbed and swirled up and down, round and round. "We can paint!" she said enthusiastically. She watched her friend as he painted and also leaned round the easel to see what C was up to on the other side. She continued to speak with the

teacher as long as the teacher stayed near by. At this point, her friend decided to wash his hands. She followed with her eyes as her friend moved away with the teacher to the sink outside the room. D continued to stand, holding a brush, while she looked around the room. "I'm using paint!" she said to no one. Once more she glanced around the easel to see what C was up to. She made a final yellow stroke then, and moved away from the easel. "I'm all done!" she said. (Notes reveal that D seemed to enjoy having her teacher there while she worked. Little work was done after the teacher left.)

A second episode found D at the clay table (May 18, 1985). Her friend (the boy from the episode just described) was there, as well as Subject C and the assistant teacher. D removed two long sticks from a piece of clay. "Oh, isn't that nice!" she said cheerfully ... exactly what was so nice was not clear.

She looked away from her work as she pinched off a very tiny piece of clay. She glanced up at her teacher, and then down again. She rolled a tiny bit between her fingers, and then, showing it to the assistant teacher, said "Look at that!" She put it down on the table and walked away. Leaving, she

glanced back at the table where her tiny piece was laid.

Later that same day D returned to the clay table, interested in a foam ball that Subject C had just acquired. Again she picked up a tiny piece of clay and said emphatically "Isn't that nice!" Picking up C's clay, she said "Look at that!" She then put it down and walked away. Shortly afterwards, she and her friend (the boy mentioned) were laughing and playing with the ball. As they passed the clay bin, they each took clay out, still laughing, and began to work. They made pieces with sticks stuck in them; they seemed to be playing together. Finally all the children decided to go out to wash their hands.

A final example found D once again with her friend (November 13, 1985). As the episode began, D was alone. She worked disinterestedly, dabbing and stirring at a puddle of red paint on her red paper. She looked away from her paper as she worked, rarely looking at it. At this point, her friend joined her, sitting down beside her. D continued to work in the same manner, seldom looking down at the paper. Suddenly she laughed, and leaned over to speak with her friend. He smiled back. Then D became much more

animated. She made a "funny" or "comic" sounding sentence. Her friend laughed, enjoying her. He then made a pretend "sneezing" gesture, smiling. D continued to laugh and her friend responded. Her interaction with the boy seemed to be of much greater interest than the painting activity. The teacher now came along to hang their work. D and the boy were still acting a little silly. The teacher asked "Do you want to find another job now?" She helped them remove their aprons. They rinsed their hands in a nearby bucket and headed off together.

CHAPTER VI
REFLECTIONS ON RESULTS

Introduction

This chapter provides a condensed review of each subject's experiences, plus an overview of all results.

Summary -- Subject A

Subject A's episodes were characterized by a high number of "brief" and "medium" episodes, and a preference for working at the collage table and the easel. Although over half of A's episodes involved the immediate presence of others, very little watching or distraction was evident. Only one instance of imitation was observed. Verbal interaction within A's episodes was also slightly less than for other subjects. A notable aspect of A's experiences was the relatively high number of episodes (29%) which were devoted solely to manipulating or sorting tools and materials rather than using them in a more conventional sense. This tendency, combined with A's high mobility and low distractibility indicate that his primary interactions were with the physical rather than with the human environment. While A showed interest in sharing his accomplishments with his teachers, there is no evidence that he particularly wanted them nearby

while he worked. A's interactions with other children during art episodes were fairly minimal.

It is worth noting, however, that in spite of A's rather hectic approach, his experiences could not be characterized as haphazard or uninvolved. He seemed highly absorbed in his work despite the fact that episodes were often fleeting. In reviewing A's behavior, one senses a rather systematic approach to exploring the total environment.

Summary -- Subject B

Subject B's episodes were characterized by a high number of medium-length episodes and a preference for working at the collage table and the easel. Although most episodes involving using a material/tool, 31% involved only watching, organizing, or "other" activities. A very high percentage (81%) of B's episodes involved the immediate presence of another. Watching another interact with materials/tools occurred in 12 episodes, 38% of the total number identified. All but one instance of watching, however, were directed at children. Over one-half of the episodes involved at least one instance of verbal exchange with the subject, and by far most of these exchanges were between the subject and adults. While 41% of the

episodes involved at least one instance of distraction, only two could be characterized as containing a high or frequent amount of distraction. No episodes contained a "play" component as defined by this study. Although children were present within episodes equally as often as adults, B's exchanges with them were limited, except perhaps in the area of watching the use of materials/tools. Adult's behavior, on the other hand, focused predominantly within B's episodes on verbal exchange and support activities related to the art activity. Rarely using art materials themselves, adults were rarely watched.

Descriptive passages indicated that interaction with adults played a rather important part in many of B's episodes, and a very important role in the longest episodes documented. Although B appeared to be interested in using art materials, several sequences indicated that an adult presence was preferred, and acted to maintain and extend her work.

Summary -- Subject C

Subject C's episodes were characterized by a high percentage of medium and long encounters. No "brief" episodes were recorded. Most episodes took place at the clay/dough table or at the easel. A high

percentage (76%) involved material/tool use. About 70% of C's episodes involved the immediate presence of another, and watching another -- usually a child -- use a material was evident in 62% of the episodes identified. At least 5 instances (7.5%) of imitation were noted. Subject C's episodes were strongly characterized by distraction (86%) and a relatively high percentage of total episodes (43%) were judged to contain frequent or sustained distraction from an art activity.

While verbal interaction with the subject was the most frequent type of adult behavior related to C's episodes, 8 (22%) revealed some use of a material or tool by an adult. All but one of these involved clay or clay tools.

Descriptive passages of C's experiences revealed evidence that there was a fairly strong relationship between his use of art materials and his interactions with others, especially adults. Each of the long episodes described involved interaction with another. Several instances were noted in which C seemed to direct his attention either to or away from the material as a result of another's action. Several episodes seemed to be extended as a result of an adult

presence. Instances were also found in which C initiated interaction with an adult through an art material.

Finally, the fact that C's episodes so frequently involved holding and patting clay while watching others seemed to highlight the particular compatibility of "watching" and clay or dough manipulation.

Summary -- Subject D

D's art episodes were characterized by a high number of "medium" length encounters which took place mainly at the clay/dough table and art/collage table. A high percentage of D's episodes (78%) involved material/tool use. 15% of the episodes were solely made up of watching or tool manipulation. A very high percentage of D's episodes (81%) involved the immediate presence of another; verbal interaction took place in 67% of the total episodes defined, as well. Sixty-seven percent of D's episodes involved some watching of another interact with materials, and imitation was judged to have taken place in 19% of her art encounters. Although watching activities were directed fairly equally at adults and children, 4 of the 5 instances of imitation occurred with adults. Distraction was evident in 67% of this subject's

episodes; 37%, a relatively high amount, involved frequent or sustained distraction. Although adult behavior still was limited mainly to support activities, a comparatively high number (26%) of episodes were found in which an adult used the material in the presence of this subject.

Descriptive sequences revealed some evidence that this subject enjoyed working or interacting with an adult while she used art materials. Unlike any other subject, however, there was among D's episodes evidence that social interaction with another child was also an important component within art episodes. In some cases it appeared that the art activity was simply a vehicle for initiating interaction, or that art activity became incidental to the social interaction as it progressed.

Activities in other parts of the room were of interest to this subject, and many instances were also found in which she used a material but paid little attention to it, gazing out into the room as she worked. This was true particularly with clay episodes; it is easy to squeeze and pinch clay while looking elsewhere. Even when working at the easel or other activities which tended to direct one's focus, however, D consistently made sure to check on the activities of

others.

Summary of Results -- All Subjects

It is perhaps important at this point to reiterate the limitations of this study and thus to provide a framework from which meaning may be taken from the results. We are dealing here with four young individuals only; the findings cannot therefore be applied to the general preschool population. The results are, however, representative of the observable art experiences of the four subjects within the setting. In the following remarks, having previously summarized individual experiences, an overview of the four is provided (see Table 1), and the individual experiences of the subjects are contrasted.

With respect to the location or centres at which the subjects became involved with art materials, subjects worked fairly equally at the easel, the art/collage table, and at the clay/dough table, though participation at the clay table was slightly less than at the first two. (This may well be explained by the fact that the clay and dough were not as regularly available to subjects in the second year of the study as in the first.) Of some small note is the fact that 21 episodes (15%) of the total identified were not at

these traditional centres, but at the chalkboard, the pencil sharpener, and various other locations around the room.

Predictably, most experiences noted in the study (69%) involved the use of a material or tool by a subject. Again, however, about 15% of the episodes were concerned only with manipulating or organizing the tools rather than actually using them. At least 8% of the episodes involved no use of a tool or material at all, but instead involved looking at another's painting; taking paintings down or putting them up; writing one's name on one's paper; or peeling the paper cover off crayons -- a popular pastime! Thus, while 69% of the episodes did actually involve material use, 31% involved activity which was related to but not art-making per se.

Another predicable result in a group setting, 71% of the episodes identified found subjects in the immediate presence of another. Of those, the presence of adults and children was fairly equal. Given that there were far fewer adults than children in the room, this result may be explained either by the fact that adults regularly moved from station to station or by the fact that the children tended to cluster around the

adults in the room. Of some interest, 29% of the episodes found subjects working completely alone at a centre, a feat which would seem difficult in a group setting.

Some watching of another using an art material was noted in 43% of the total episodes. If one applies this number to the number of episodes in which another was present to watch, the percentage increases to 62%. With these results, it seems fair to state that watching another use materials and tools played a fairly significant part in these subjects' art experiences.

Verbal interaction, as well, occurred in most (54%) of the episodes, in spite of these subjects' limited verbal capacities. Slightly more instances were noted in which others spoke to the subject than vice versa. Nevertheless, the subjects spoke to others in at least 38% of the episodes. Of episodes containing verbal interaction, 83% were related to the art encounter.

Imitation of another's use of materials was not a significant part of these subjects' experiences, occurring in only 8% of the total episodes. Of some note, however, is that more imitation of adults (5%)

occurred than of children (2%) in total; in other words, 63% of the instances of imitation which did occur involved imitation of adults. Again, the limited number of adults and the infrequency with which adults were found to use materials makes this result of interest.

The extent to which the group environment proved to be a distraction for these subjects was not entirely clear. It is true that 55% of the episodes identified contained instances in which the subjects looked away from their work as a result of other action in the environment. Only 21% of those, however, could be characterized as frequent or sustained distraction according to the definition provided in this study. It is rather more surprising that, given the environment, 45% of the episodes contained no distraction at all.

The lengths of the art encounters observed in this study were included here largely as a means of putting these experiences in a context. As exact times for encounters were not available, the broadest possible definitions were chosen: brief episodes were those which fairly flitted by -- under one minute long; long episodes were sustained encounters for a preschooler: 10 minutes or more; and a medium length was anything in

between the other two. Under these circumstances, the "medium" length episodes would seem to have an "edge", a hunch born out by the percentages: 64% of the episodes fell into the "medium" category. Nevertheless, it is interesting to note that nearly 25% of all the episodes recorded were actually less than one minute in length, and only about 11% (15 in total) were 10 minutes or longer in duration. Whether the broad choice available in the setting or the active human environment served as factors in episode length is uncertain. Some argument could be made, however, that, for certain subjects (A is a good example) the availability of many stations may have caused wide-ranging but brief exploration of many activities rather than more in depth focus on one or two.

The narrow definition of "play" used in this study -- using an art material in a "pretend" context -- could be applied to one subject's episode only. In addition, one example was found in the work of another boy working near a subject. These both involved with clay: making "cookies" and "flying" a clay airplane.

Thirteen episodes, 9% in total, were noted in which subjects used art materials on the same surface with another child. These results seem rather low, on

one hand, given the environment, but may partially reflect a lack of projects which might direct children to work together (murals, one central lump of clay instead of several smaller one, etc.). Perhaps the most interesting point to make about this result is that 8 of the 13 took place at the easel, a piece of equipment designed with the individual worker in mind. Only 2 instances could be found in which an objection to being joined by another painter was voiced, and only one of these resulted in turning a subject away.

In addition, at least 6 instances were noted in which Subject A painted on another's painting in the other's absence. In fact, many children did not seem concerned with the notion of "owning" a painting during the early sequences. Rather, it was the adults who seemed to drive this point home by changing paper when a child started to work on another's piece, writing on names, etc.

The most frequent behavior of adults interacting with subjects in this setting was verbal interaction. Adults spoke to subjects before, during, and after the subjects used art materials, and particularly provided positive feedback and encouragement. In addition, adults assisted with the process by organizing

materials, changing paper, hanging paintings, writing on names, rolling up sleeves, and putting on and pulling of aprons. Episodes in which adults actually used art materials were infrequent, 18 (13%) in all. Half of these involved various other materials. Only two instances could be found in which an adult referred to making or made an object herself: once when the assistant teacher said she was "making a dragon", and once when another assistant "made" a pine cone covered with glitter. The remaining examples occurred either at the subjects' requests and/or involved "exploratory" kinds of interactions with the material: quick dabs of paint on a paper, or rolling and patting clay between one's hands.

CHAPTER VII**SUMMARY, CONCLUSIONS, AND IMPLICATIONS****Summary**

The purpose of this study was to investigate the extent of interaction within a group environment and its effects on the art experiences of four young subjects working in a preschool setting. Video taped recordings and written notes were gathered over a two-year period, serving as the data for the study. The data were then analyzed in an effort to describe and categorize those social exchanges which occurred during interaction with art materials. Results were presented in tables and descriptive passages. A discussion of the hypotheses posed for the study is offered as a prelude to the presentation of conclusions and implications.

Consideration is first given to the results of data analysis within the context of the hypotheses posed for the study. An attempt will be made to address issues with consideration both to overall results of all four subjects as well as with respect to characteristics of individual subjects.

H₁ Subjects will tend to use art materials in the immediate presence of others

This hypothesis is supported in general. The immediate presence of another was evident in over 70% of the episodes identified overall. This result is not surprising given the group environment, but does reinforce generally the notion that art experiences for children in such settings are not solitary affairs. The fact that others were present in a large number of episodes does not imply, however, an automatic impact on the art experiences of the subjects. It simply points to the high potential for interaction, and to the possibility, therefore, of an effect on art encounters. While the number of episodes including others present was high in total, some individual differences did occur: Subject A, 56%; Subject B, 81%; Subject C, 70%; Subject D, 81%. The significance of these individual differences will be addressed at a later point.

H₂ Subjects will tend to watch or observe others using art materials prior to, during, and after the subject's own use of materials.

This hypothesis is also supported, although to a somewhat lesser extent. Episodes made up solely of

watching took place in 8% of the total episodes observed. Over 40% of the episodes contained some watching before, during, or after the subjects' uses of materials. With respect to individual subjects, episodes involving watching only occurred as follows: Subject A, 2%; Subject B, 12.5%; Subject C, 11%; Subject D, 7%. Episodes involving some watching occurred as follows: Subject A, 17%; Subject B, 37.%; Subject C, 62%; Subject D, 67%. Concerning the effects of watching others on subjects' art interactions, tangible evidence was rather difficult to establish. Some immediate imitation occurred within episodes, but it was infrequent (see H₄), and evidence was found that some subjects chose to delay participation in art activities until after watching another use materials (Subjects C & D). A point of interest with respect to this hypothesis, however, is who was being watched. Although subjects watched both adults and children use materials, children were the more frequent focus, because adults used materials less often. When adults did use materials, they tended to use them in "exploratory" or "manipulative" ways rather than representationally. Although evidence from these data revealed that subjects spontaneously watched others,

the fact that adults often chose not to use materials in the subjects' presence may have been a missed opportunity. Individual differences in watching behavior seem to indicate that providing something to watch (modelling) may prove to be more effective in extending some children's work more than in others cases.

H₃ Subjects will tend to interact verbally with others during their own interaction with art materials

This hypothesis is also supported. Over 50% of the episodes observed involved some verbal exchange, perhaps more significant in light of the limited verbal development of the young subjects. While it was established that most verbal exchanges (83%) within the observations collected were related to the art activity, it cannot be assumed that the existence of verbal interaction had a direct impact on the art created. Verbal remarks seemed often to renew subjects' interests in a project or caused them to start a second project. Verbal interaction could also interfere with the interaction with materials, of course, as when the teacher would announce clean-up time. Again some individual differences occurred among

the subjects with respect to the percentage of episodes containing verbal interaction: Subject A, 44%; Subject B, 66%; Subject C, 49%; Subject D, 67%. What is said, and whether it is appropriate for the individual at a given time are crucial factors in considering whether or not an activity will be reinforced or enhanced.

H₄ Subjects will tend to engage in imitation or copying of others' use of materials through gesture or image making.

This hypothesis is not supported overall. Limited to the consideration of imitation which occurred immediately after watching, 8% of the episodes identified included evidence of imitation. Individual percentages were: Subject A, 2%; Subject B, 0%; Subject C, 13.5%; Subject D, 22%. Of those percentages, about 63% of the imitation observed occurred after watching adults; 27% occurred after watching children.

H₅ Subjects will tend to be distracted from the use of art materials by the presence or actions of others.

This hypothesis is not supported overall by the data available. Although over 50% of the episodes observed contained some "looking away" from the art activity, only 20% of the episodes were characterized

as containing "sustained" (prolonged or frequent) distraction. The remaining instances did not appear to interrupt the activity, but rather seemed to be a method of maintaining awareness of activity throughout the classroom setting. Individual results concerning frequent or sustained distraction were: Subject A, 2%; Subject B, 6.25%; Subject C, 43%; Subject D, 22%. With respect to Subject D, evidence within the descriptive data did indicate that interest in social interaction took precedence over interest in art material use.

H₆ There will be a positive relationship between subjects' interactions with others and the intensity of subject involvement with art materials.

The analysis of this hypothesis is less straightforward than the previous ones, however, overall it seems it cannot be supported as written. This assessment is best understood in terms of individual scenarios. With respect to B, for example, a number of episodes were cited within the data in which an adult's interactions appeared to extend an art episode or renew the subjects interest in the activity. It was often clear that adult presence was preferred, and occasionally it seemed that interest in working

beside an adult was at least as important as interest in the materials. Subject B's episodes overall however, could be characterized as involved and intense, as evidenced by several long encounters, low distraction, and an obvious enjoyment in use of the materials.

Subject C, similarly, had many episodes in which involvement by an adult seemed to renew his interest and extend the encounter. C also at times sought out the company of adults. Often observed as he looked away from this work at other activities in the room, C's attention was frequently refocused by adults. C's episodes varied in intensity.

In addition to interaction with adults, many of D's interactions were with children, and evidence was found that, on occasion, interaction with other children took precedence over interest in the materials. Subject A, however, interacted relatively little with others and had many very brief episodes, but his involvement in his work still appeared to be "intense".

Thus, even in such a small sample of subjects, evidence exists of very different ways in which social interaction can affect art activity, depending on the

individual's approach to his or her environment.

Conclusions

Overall, this study confirms that young children's art encounters are filled with instances of interaction with others: working beside and with others, watching others work; talking to others; getting assistance and feedback from others. Certainly some evidence has been collected to show that others may cause children to choose to work with art materials in the first place, and that children tend to work with them longer when others, especially adults, are involved. These points alter our perceptions of children's art experiences if we think of them mainly as personal and solitary interactions with materials. The fact that so many varieties of interactions took place reinforces the possibility that benefits may occur through adult involvement. This applies to parents as well as to professional helpers and teachers.

At the same time, evidence within the study suggests that there are many ways in which individuals may make use of environmental resources, and the kind of interaction which is appropriate, or which will extend a child's experience, will depend on understanding that child's motivations and mode of

operating.

Analysis of the social interactions within a setting can reveal something of the social construction of knowledge about art activity. This information can be useful in determining the range of goals for children's art experiences that may exist in any one setting. A child may think, as a result of what has gone on in this classroom, that:

- * Art is primarily an individual process.
- * Art materials are used by children rather than adults.
- * The reasons for making art are not clear-cut.
- * Art products receive praise.
- * Art works are displayed when completed.
- * Certain materials are appropriate for art, others less so.
- * Cleaning up after art making is important.

One final conclusion which emerges from these data is that watching and tool manipulation seem to lead up to and continue to be part of art material use as children develop. While development per se is outside the scope of this study, this conclusion holds implications for the encouragement of interaction, through the provision of settings and of opportunities

for interaction to occur.

Implications

Those who deal with young children should become aware of ways in which individual children interact with the environment. Interactions often provide clues on how to extend and support art experiences. Play sustaining techniques such as active looking on, non-directive statements, questioning, directive statements, and modeling (Wolfgang & Sanders, 1986) can be applied to watching, tool manipulation and organization and material use within art activity.

For children who are more socially inclined, art experiences in which children work together in small groups may be beneficial: group painting or group 3-D constructing are possibilities.

In general, adults might give more attention than is currently the case to active participation in the art activity. The adult role model is in a position to extend art activity, perhaps in the direction of representation (making an object, for example, rather than simply rolling balls with the clay); perhaps in the direction of play and the use of the imagination. Doing so may alter the state of affairs observed in this study, where children's watching materials in use

is often directed at other children's activity rather than that of adults. Modelling should, however, be used carefully, in conjunction with heuristic tasks, in which no specific end is sought.

Within the field of art education, the use of art materials for the purpose of play and pretend activity receives comparatively little attention. Emphasis on pretending with art materials could provide a balance to the focus on representation currently found in the literature and in classroom practice, and could also be highly social, and therefore appealing to some children. Clay seems to have a great deal of potential here, as evidenced by the "cookie" episode in this study. Clay can be used to make up stories, to illustrate stories read, or for general play: making a tea party with clay, for example. This kind of directed activity, of course, would need to be introduced after children had had some opportunity to explore the material.

In general it seems that the simple presence of adults and the opportunity to interact with materials provide only partial art experiences for children. Interaction, however, is much more complex than its definition might seem to imply. Interaction may

involve dialogue about or participation in art processes, as well as discussion about products. When the situation is appropriate, interaction may take the form of modelling: the adult demonstrates the use of a tool, and answers the child's questions on what the tool does or how it works. Interaction may involve adult and child or several children in applying a process or a material in a variety of ways that are playful or serious, depending on the mood in which the event occurs. A more active role by adults during the art material and tool use of young children seems indicated, but determining appropriate interaction will require, beyond knowledge of materials and processes, understanding of the individual child's approach and motivations.

REFERENCES

- Amabile, T.M. (1983). The social psychology of creativity. New York: Springer-Verlag.
- Best, R. (1983). We've all got scars: What boys and girls learn in elementary school. Bloomington: Indiana University Press.
- Berger, P.L. & Luckmann, T. (1966). The social construction of reality: A treatise in the sociology of knowledge. New York: Doubleday.
- Boocock, S. (1972). An introduction to the sociology of learning. Boston: Houghton Mifflin.
- Chalmers, G. (1984). Artistic perception: The cultural context. Journal of Art and Design Education. 3(3), 279-289.
- Chalmers, G. (1981). Art education as ethnology. Studies in Art Education. 22(3), 6-14.
- Chapman, L.H. (1982). Instant art, instant culture: The unspoken policy for American schools. New York: The Teacher's College Press.
- Duncum, P. (1984). How 35 children born between 1900 and 1924 learned to draw. Studies in Art Education. 26(2), 93-103.

- Etaugh, C., Collins, G. & Staulcup, V.H. (1979). Social participation in two-year-old children. The Journal of Genetic Psychology. 134, 159-160.
- Frieze, F.H. (1980). Beliefs about success and failure in the classroom. In J.H. McMillan (Ed.), The social psychology of school learning (pp.39-78). New York: Academic Press.
- Fucigna, C., Ives, K.C., & Ives, W. (1982). Art for toddlers: A developmental approach. Young Children, 37(3), 45-51.
- Good, T.L. (1980). Classroom expectations. In J.H. McMillan (Ed.), The social psychology of school learning (pp.80-117). New York: Academic Press.
- Green, V.P. (1986). Teachers and the play curriculum: Issues and trends. In S. Burroughs & R. Evans (Eds.), Play, language, and socialization (pp.11-19). New York: Gordon and Breach Science Publishers.
- Hamblen, K.A. (1984). Artistic perception as a function of learned expectations. Art Education, 37(3), 20-25.
- Johnson, D. (1980). Group processes: Influences of student-student interaction on school outcomes. In J.H. McMillan (Ed.), The social psychology of

school learning (pp.124-157). New York: Academic Press.

Johnson, N. (1982). Children's meanings about art. Art Education, 23(3), 61-67.

Korzenik, D. (1981). Is children's work art? Some historical views. Art Education, 34(5), 20-24.

Korzenik, D. (1979). Socialization and drawing. Art Education, 32(1), 26-29.

Korzenik, D. (1974). Role taking and children's drawings. Studies in Art Education, 15(3), 17-24.

Kratochwill, C.E., Ruch, J.C. & Kratochwill, T.R. (1979). The effects of descriptive social reinforcement on creative responses in children's easel painting. Studies in Art Education, 26(2), 29-39.

LaChapelle, J.R. (1984). The sociology of art and education: A relationship reconsidered. Studies on Art Education, 26(1), 34-40.

LaChapelle, J.R. (1983). Creativity research: Its sociological and educational limitations. Studies in Art Education, 24(2), 131-139.

Lepper, M.E., Greene, D., & Nisbett, R.E. (1979). Undermining children's intrinsic interest with extrinsic rewards: A test of the

- "overjustification" hypothesis. Journal of Personality and Social Psychology, 28, 129-137.
- MacGregor, R.N. (1987). Mentor's introduction. Working Papers in Art Education, (6), 67-68.
- McMillan, J.H. (Ed.). (1980). The social psychology of school learning. New York: Academic Press.
- Mueller, E. & Brenner, J. (1977). The origins of social skills and interaction among playgroup toddlers. Child Development, 48, 854-861.
- Mueller, E. & Lucas, T. (1975). A developmental analysis of peer interaction among toddlers. In M. Lewis & L.A. Rosenblum (Eds.), Friendship and peer relations (pp.223-257). New York: John Wiley and Sons.
- Parten, M. (1971). Social play among preschool children. In R.E. Herron & B. Sutton-Smith (Eds.), Child's play (pp.83-95). New York: John Wiley and Sons.
- Saracho, O.N. (1986). Young children's play behaviors and cognitive styles. In S. Burroughs & R. Evans (Eds.), Play, language and socialization (pp.21-38). New York: Gordon and Breach Science Publishers.

- Sherman, L. (1983). Three dimensional media for communication, expression, and socialization (preschool). In R.M. MacGregor (Ed.), Readings in Canadian art education (pp.139-142). University of British Columbia, Faculty of Education: Western Education Development.
- Smith, N.R. (1982). The visual arts in early childhood education: Development and the creation of meaning. In B. Spodek (Ed.), Research in early childhood education (pp.295-317).
- Schneider, K., Moch, M., Sandfort, R, Averswal, M., & Walter-Weckman, K. (1983). Exploring a novel object by preschool children: A sequential analysis of perceptual, manipulating, and verbal exploration. International Journal of Behavioral Development, 6, 477-496.
- Tamburrini, J. (1986). Play and the role of the teacher. In S. Burroughs and R. Evans (Eds.), Play, language, and socialisation (pp.39-47). New York: Gordon and Breach Science Publishers.
- Tarr, P. (1987). Symbolic interactionism as a theoretical perspective for the study of children's artistic development. Working Papers in Art Education, (6), 69-77.

- Wilson, R. & Wilson, M. (1977). An iconoclastic view of the imagery sources in the drawings of young people. Art Education, 30, (1), 5-12.
- Wilson, B. & Wilson, M. (1982a). The case of the disappearing two-eyed profile: Or how little children influence the drawings of other little children. Visual Arts Research, 15 Winter, 19-32.
- Wilson, B. & Wilson, M. (1982). Teaching children to draw: A guide for teachers and parents. Englewood Cliffs: New Jersey: Prentice Hall.
- Wolfgang, C.; and Sanders, T. (1986). Teacher's role: A construct for supporting the play of young children. In Sue Burroughs and Roy Evans (Eds.), play, language, and socialisation (pp.49-62).
- Yakel, Norman (1980/81). A study to determine the effects of children copying adult images of the human form. Canadian Review of Art Education Research, 6/7, 169-179.

APPENDICES

APPENDIX A

Tables A-1 through A-7

APPENDIX

Table A-1. Location of Activities -- Subject A

| Date of Episode | Number of Episodes | Clay/dough | Easel | Collage/Art | Chalk-board | Pencil Sharpener | Other |
|-----------------|--------------------|-------------|---------------|--------------|-------------|------------------|--------------|
| 11/2/84 | 4 | 0 | 0 | 2 | 2 | 0 | 0 |
| 11/30/84 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 12/14/84 | 5 | 1 | 1 | 3 | 0 | 0 | 0 |
| 1/25/85 | 9 | 0 | 7 | 2 | 0 | 0 | 0 |
| 2/15/85 | 12 | 1 | 7 | 3 | 0 | 0 | 1 |
| 3/22/85 | 2 | 0 | 1 | 0 | 0 | 1 | 0 |
| 10/16/85 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| 3/5/86 | 6 | 0 | 2 | 0 | 0 | 0 | 4 |
| Total/ % | 41 | 2 4.878% | 19 46.341% | 10 24.39% | 2 4.878% | 1 2.439% | 7 17.073% |

Table A-2. Activities -- Subject A

| Date of Episode | Number of Episodes | Watching Only | Using material/tool only | Manipulating tool only | Organizing tools/materials | other |
|-----------------|--------------------|---------------|--------------------------|------------------------|----------------------------|-------------|
| 11/2/84 | 4 | 0 | 3 | 1 | 0 | 0 |
| 11/30/84 | 1 | 0 | 0 | 0 | 1 | 0 |
| 12/14/84 | 5 | 0 | 4 | 0 | 0 | 1 |
| 1/25/85 | 9 | 1 | 7 | 1 | 1 | 0 |
| 2/15/85 | 12 | 0 | 4 | 2 | 4 | 0 |
| 3/22/85 | 2 | 0 | 1 | 1 | 0 | 0 |
| 10/16/85 | 2 | 0 | 2 | 0 | 0 | 0 |
| 3/5/85 | 6 | 0 | 3 | 0 | 1 | 3 |
| Total/ % | 41 | 1 2.439% | 24 58.536% | 5 12.195% | 7 17.073% | 4 9.756% |

Table A-3. Immediate Presence of Others -- Subject A

| Date of Episode | Number of Episodes | Yes | No | Adult | Child | Adult & Child |
|-----------------|--------------------|---------------|---------------|--------------|--------------|---------------|
| 11/2/84 | 4 | 2 | 2 | 2 | 0 | 0 |
| 11/30/84 | 1 | 1 | 0 | 0 | 1 | 0 |
| 12/14/84 | 5 | 2 | 3 | 0 | 1 | 1 |
| 1/25/85 | 9 | 6 | 3 | 3 | 2 | 1 |
| 2/15/85 | 12 | 4 | 8 | 1 | 1 | 2 |
| 3/22/85 | 2 | 1 | 1 | 0 | 1 | 0 |
| 10/16/85 | 2 | 2 | 0 | 1 | 1 | 0 |
| 3/5/86 | 6 | 5 | 1 | 3 | 0 | 2 |
| Total/ % | 41 | 23 56.097% | 18 43.902% | 10 24.39% | 7 17.073% | 6 14.634% |

Table A-4. Watching -- Subject A

| Date of Episode | Number of Episodes | Yes | No | Adult | Child | Adult & Child |
|-----------------|--------------------|--------------|---------------|-------------|-------------|---------------|
| 11/2/84 | 4 | 1 | 3 | 0 | 1 | 0 |
| 11/30/84 | 1 | 1 | 0 | 0 | 1 | 0 |
| 12/14/84 | 5 | 2 | 3 | 0 | 1 | 1 |
| 1/25/85 | 9 | 1 | 8 | 0 | 1 | 0 |
| 2/15/85 | 12 | 0 | 12 | 0 | 0 | 0 |
| 3/22/85 | 2 | 0 | 2 | 0 | 0 | 0 |
| 10/16/85 | 2 | 0 | 2 | 0 | 0 | 0 |
| 3/5/86 | 6 | 2 | 4 | 2 | 0 | 0 |
| Total/ % | 41 | 7 17.073% | 34 82.926% | 2 4.878% | 4 9.756% | 1 2.439% |

Table A-5. Verbal Interaction -- Subject A

| Date of Episode | Number of Episodes | Yes | No | Other to Subject | Adult | Child | Subject to Other | Adult | Child |
|-----------------|--------------------|---------------|---------------|------------------|---------------|-------------|------------------|---------------|-------------|
| 11/2/84 | 4 | 2 | 2 | 2 | 2 | 0 | 1 | 1 | 0 |
| 11/30/84 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 12/14/84 | 5 | 4 | 1 | 2 | 2 | 0 | 2 | 2 | 0 |
| 1/25/85 | 9 | 3 | 6 | 3 | 3 | 0 | 2 | 2 | 0 |
| 2/15/85 | 12 | 2 | 10 | 1 | 2 | 1 | 1 | 2 | 0 |
| 3/22/85 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10/16/85 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 |
| 3/5/86 | 6 | 5 | 1 | 5 | 5 | 1 | 5 | 5 | 1 |
| Total/ % | 41 | 18 43.902% | 23 56.097% | 15 36.585% | 15 36.585% | 3 7.317% | 12 29.268% | 13 31.707% | 1 2.439% |

Table A-6. Imitation -- Subject A

| Date of Episode | Number of Episodes | Yes | No | Adult | Child |
|-----------------|--------------------|-------------|--------------|-------------|---------|
| 11/2/84 | 4 | 1 | 3 | 1 | 0 |
| 11/30/84 | 1 | 0 | 1 | 0 | 0 |
| 12/14/84 | 5 | 0 | 5 | 0 | 0 |
| 1/25/85 | 9 | 0 | 9 | 0 | 0 |
| 2/15/85 | 12 | 0 | 12 | 0 | 0 |
| 3/22/85 | 2 | 0 | 2 | 0 | 0 |
| 10/16/85 | 2 | 0 | 2 | 0 | 0 |
| 3/5/86 | 6 | 0 | 6 | 0 | 0 |
| Total/ % | 41 | 1 2.439% | 40 97.56% | 1 2.439% | 0 0% |

Table A-7. Distraction -- Subject A

| Date of Episode | Number of Episodes | Yes | No | Frequent/ Sustained |
|-----------------|--------------------|---------------|---------------|------------------------|
| 11/2/84 | 4 | 1 | 3 | 0 |
| 11/30/84 | 1 | 0 | 1 | 0 |
| 12/14/84 | 5 | 3 | 2 | 0 |
| 1/25/85 | 9 | 3 | 6 | 0 |
| 2/15/85 | 12 | 2 | 10 | 1 |
| 3/22/85 | 2 | 1 | 1 | 0 |
| 10/16/85 | 2 | 2 | 0 | 0 |
| 3/5/86 | 6 | 1 | 5 | 0 |
| Total/ % | 41 | 13 31.707% | 28 68.292% | 1 2.439% |

APPENDIX B

Tables B-1 through B-7

APPENDIX B

Table B-1. Location of Activities -- Subject B

| Date of Episode | Number of Episodes | Clay/dough | Easel | Collage/Art | Chalk-board | Pencil Sharpener | Other |
|-----------------|--------------------|------------|--------------|---------------|-------------|------------------|-------------|
| 11/2/84 | 7 | 0 | 0 | 3 | 3 | 0 | 1 |
| 11/30/84 | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
| 12/14/84 | 4 | 0 | 1 | 3 | 0 | 0 | 0 |
| 1/25/85 | 4 | 0 | 3 | 1 | 0 | 0 | 0 |
| 2/15/85 | 3 | 1 | 0 | 2 | 0 | 0 | 0 |
| 3/22/85 | 7 | 0 | 4 | 3 | 0 | 0 | 0 |
| 4/14/85 | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
| 12/11/85 | 3 | 1 | 1 | 1 | 0 | 0 | 0 |
| Total/ % | 32 | 2 6.25% | 9 28.125% | 17 53.125% | 3 9.375% | 0 | 1 3.125% |

Table B-2. Activities -- Subject B

| Date of Episode | Number of Episodes | Watching Only | Using material/ tool only | Manipulating tool only | Organizing tools/ materials | other |
|-----------------|--------------------|---------------|------------------------------|------------------------|--------------------------------|------------|
| 11/2/84 | 7 | 1 | 6 | 0 | 0 | 0 |
| 11/30/84 | 2 | 0 | 2 | 0 | 0 | 0 |
| 12/14/84 | 4 | 0 | 2 | 0 | 0 | 2 |
| 1/25/85 | 4 | 1 | 2 | 0 | 0 | 0 |
| 2/15/85 | 3 | 1 | 1 | 0 | 0 | 1 |
| 3/22/85 | 7 | 0 | 5 | 0 | 2 | 1 |
| 4/14/85 | 2 | 0 | 2 | 0 | 0 | 0 |
| 12/11/85 | 3 | 1 | 2 | 0 | 0 | 0 |
| Total/ % | 32 | 4 12.5% | 22 68.75% | 0 | 2 6.25% | 4 12.5% |

Table B-3. Immediate Presence of Others -- Subject B

| Date of Episode | Number of Episodes | Yes | No | Adult | Child | Adult & Child |
|-----------------|--------------------|--------------|-------------|--------------|--------------|---------------|
| 11/2/84 | 7 | 5 | 2 | 2 | 3 | 0 |
| 11/30/84 | 2 | 2 | 0 | 2 | 0 | 0 |
| 12/14/84 | 4 | 3 | 1 | 1 | 1 | 1 |
| 1/25/85 | 4 | 3 | 1 | 0 | 3 | 0 |
| 2/15/85 | 3 | 3 | 0 | 0 | 0 | 3 |
| 3/22/85 | 7 | 5 | 2 | 3 | 1 | 1 |
| 4/14/85 | 2 | 2 | 0 | 1 | 0 | 1 |
| 2/11/85 | 3 | 3 | 0 | 1 | 2 | 0 |
| Total/ % | 32 | 26 81.25% | 6 18.75% | 10 31.25% | 10 31.25% | 6 18.75% |

Table B-4. Watching -- Subject B

| Date of Episode | Number of Episodes | Yes | No | Adult | Child | Adult & Child |
|-----------------|--------------------|-------------|-------------|---------|---------------|---------------|
| 11/2/84 | 7 | 2 | 5 | 0 | 2 | 0 |
| 11/30/84 | 2 | 1 | 1 | 0 | 1 | 0 |
| 12/14/84 | 4 | 2 | 2 | 0 | 2 | 0 |
| 1/25/85 | 4 | 2 | 2 | 0 | 2 | 0 |
| 2/15/85 | 3 | 3 | 0 | 0 | 3 | 0 |
| 3/22/85 | 7 | 0 | 7 | 0 | 0 | 0 |
| 4/14/85 | 2 | 1 | 1 | 0 | 0 | 1 |
| 12/11/85 | 3 | 1 | 2 | 0 | 1 | 0 |
| Total/ % | 32 | 12 37.5% | 20 62.5% | 0 0% | 11 34.375% | 1 3.125% |

Table B-5. Verbal Interaction -- Subject B

| Date of Episode | Number of Episodes | Yes | No | Other to Subject | Adult | Child | Subject to Other | Adult | Child | un-certain |
|-----------------|--------------------|---------------|---------------|------------------|--------------|-------------|------------------|---------------|------------|------------|
| 11/2/84 | 7 | 4 | 3 | 2 | 2 | 0 | 4 | 2 | 1 | 1 |
| 11/30/84 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | |
| 12/14/84 | 4 | 3 | 1 | 1 | 1 | 0 | 3 | 3 | 0 | |
| 1/25/85 | 4 | 1 | 3 | 1 | 1 | 0 | 1 | 1 | 0 | |
| 2/15/85 | 3 | 2 | 1 | 2 | 2 | 0 | 2 | 2 | 0 | |
| 3/22/85 | 7 | 5 | 2 | 5 | 5 | 0 | 4 | 4 | 0 | |
| 4/14/85 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 0 | |
| 12/11/85 | 3 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | |
| Total/ % | 32 | 21 65.625% | 11 34.375% | 17 53.125% | 16 50.00% | 1 3.125% | 20 62.50% | 17 53.125% | 2 6.25% | 1 |

Table B-6. Imitation -- Subject B

| Date of Episode | Number of Episodes | Yes | No | Adult | Child |
|-----------------|--------------------|-----|------------|-------|-------|
| 11/2/84 | 7 | 0 | 7 | 0 | 0 |
| 11/30/84 | 2 | 0 | 2 | 0 | 0 |
| 12/14/84 | 4 | 0 | 4 | 0 | 0 |
| 1/25/85 | 4 | 0 | 4 | 0 | 0 |
| 2/15/85 | 3 | 0 | 3 | 0 | 0 |
| 3/22/85 | 7 | 0 | 7 | 0 | 0 |
| 4/11/85 | 2 | 0 | 2 | 0 | 0 |
| 12/11/85 | 3 | 0 | 3 | 0 | 0 |
| Total/ % | 32 | 0 | 32 100% | 0 | 0 |

Table B-7. Distraction -- Subject B

| Date of Episode | Number of Episodes | Yes | No | Frequent/ Sustained |
|-----------------|--------------------|-------------|-------------|------------------------|
| 11/2/84 | 7 | 2 | 5 | 0 |
| 11/30/84 | 2 | 1 | 1 | 0 |
| 12/14/84 | 4 | 1 | 3 | 0 |
| 1/25/85 | 4 | 1 | 3 | 0 |
| 2/15/85 | 3 | 2 | 1 | 2 |
| 3/22/85 | 7 | 2 | 5 | 0 |
| 4/14/85 | 2 | 1 | 1 | 0 |
| 12/11/85 | 3 | 2 | 1 | 0 |
| Total/ % | 32 | 12 37.5% | 20 62.5% | 2 6.25% |

APPENDIX C

Tables C-1 through C-7

APPENDIX C

Table C-1. Location of Activities -- Subject C

| Date of Episode | Number of Episodes | Clay/ dough | Easel | Collage/ Art | Chalk- board | Pencil Sharpener | Other |
|-----------------|--------------------|----------------|---------------|-----------------|-----------------|---------------------|-------------|
| 11/5/84 | 4 | 0 | 3 | 0 | 1 | 0 | 0 |
| 11/26/84 | 4 | 2 | 1 | 1 | 0 | 0 | 0 |
| 12/10/84 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1/21/85 | 6 | 0 | 1 | 4 | 0 | 1 | 0 |
| 2/18/85 | 5 | 3 | 2 | 0 | 0 | 0 | 0 |
| 3/18/85 | 7 | 5 | 2 | 0 | 0 | 0 | 0 |
| 4/22/85 | 4 | 1 | 1 | 1 | 1 | 0 | 0 |
| 1/9/86 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 3/6/86 | 2 | 1 | 0 | 0 | 0 | 0 | 1 |
| 4/24/86 | 3 | 1 | 1 | 0 | 0 | 0 | 1 |
| Total/ % | 37 | 14 32.432% | 11 35.135% | 7 18.919% | 2 5.405% | 1 2.703% | 2 5.405% |

Table C-2. Activities -- Subject C

| Date of Episode | Number of Episodes | Watching Only | Using material/ tool only | Manipulating tool only | Organizing tools/ materials | other |
|-----------------|--------------------|---------------|------------------------------|------------------------|--------------------------------|-------------|
| 11/5/84 | 4 | 0 | 4 | 0 | 0 | 0 |
| 11/26/84 | 4 | 0 | 4 | 0 | 0 | 0 |
| 12/10/84 | 1 | 1 | 0 | 0 | 0 | 0 |
| 1/21/85 | 6 | 1 | 2 | 1 | 2 | 0 |
| 2/18/85 | 5 | 0 | 5 | 0 | 0 | 0 |
| 3/18/85 | 7 | 1 | 5 | 0 | 0 | 1 |
| 4/22/85 | 4 | 0 | 4 | 0 | 0 | 0 |
| 1/9/86 | 1 | 0 | 1 | 0 | 0 | 0 |
| 3/6/86 | 2 | 1 | 1 | 0 | 0 | 0 |
| 4/24/86 | 3 | 0 | 2 | 1 | 0 | 0 |
| Total/ % | 37 | 4 10.81% | 28 75.675% | 2 5.405% | 2 5.405% | 1 2.702% |

Table C-3. Immediate Presence of Others -- Subject C

| Date of Episode | Number of Episodes | Yes | No | Adult | Child | Adult & Child |
|-----------------|--------------------|---------------|---------------|--------------|--------------|---------------|
| 11/5/84 | 4 | 3 | 1 | 0 | 1 | 2 |
| 11/26/84 | 4 | 3 | 1 | 0 | 1 | 2 |
| 12/10/84 | 1 | 1 | 0 | 0 | 1 | 0 |
| 1/21/85 | 6 | 3 | 3 | 0 | 1 | 2 |
| 2/18/85 | 5 | 2 | 3 | 1 | 0 | 1 |
| 3/18/85 | 7 | 7 | 0 | 4 | 0 | 3 |
| 4/22/85 | 4 | 2 | 2 | 1 | 0 | 1 |
| 1/9/86 | 1 | 1 | 0 | 0 | 0 | 1 |
| 3/6/86 | 2 | 2 | 0 | 0 | 1 | 1 |
| 4/24/86 | 3 | 2 | 1 | 0 | 0 | 2 |
| Total/ % | 37 | 26 70.270% | 11 29.730% | 6 16.216% | 5 13.514% | 15 40.541% |

Table C-4. Watching -- Subject C

| Date of Episode | Number of Episodes | Yes | No | Adult | Child | Adult & un-Child certain | |
|-----------------|--------------------|---------------|---------------|-------------|---------------|--------------------------|------------|
| 11/5/84 | 4 | 3 | 1 | 0 | 3 | 0 | |
| 11/26/84 | 4 | 3 | 1 | 0 | 1 | 2 | |
| 12/10/84 | 1 | 1 | 0 | 0 | 1 | 0 | |
| 1/21/85 | 6 | 3 | 3 | 1 | 2 | 0 | |
| 2/18/85 | 5 | 2 | 3 | 0 | 1 | 1 | |
| 3/18/85 | 7 | 5 | 1 | 3 | 0 | 2 | 1 |
| 4/22/85 | 4 | 2 | 2 | 0 | 1 | 1 | |
| 1/9/86 | 1 | 1 | 0 | 0 | 1 | 0 | |
| 3/6/86 | 2 | 2 | 0 | 0 | 2 | 0 | |
| 4/24/86 | 3 | 1 | 2 | 0 | 0 | 1 | |
| Total/ % | 37 | 23 62.162% | 13 35.135% | 4 10.81% | 12 32.432% | 7 18.918% | 1 2.70% |

Table C-5. Verbal Interaction -- Subject C

| Date of Episode | Number of Episodes | Yes | No | Other to Subject | Adult | Child | Subject to Other | Adult | Child | Un-certain |
|-----------------|--------------------|---------------|---------------|------------------|---------------|--------------|------------------|--------------|---------|-------------|
| 11/5/84 | 4 | 2 | 2 | 2 | 0 | 2 | 0 | 0 | 0 | |
| 11/26/84 | 4 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | |
| 12/10/84 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 1/21/85 | 6 | 1 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| 2/18/85 | 5 | 2 | 3 | 2 | 2 | 1 | 0 | 0 | 0 | |
| 3/18/85 | 7 | 3 | 4 | 2 | 2 | 0 | 3 | 2 | 0 | |
| 4/22/85 | 4 | 3 | 1 | 3 | 2 | 1 | 1 | 1 | 0 | |
| 1/9/86 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | |
| 3/6/86 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | |
| 4/24/86 | 3 | 2 | 1 | 1 | 1 | 0 | 2 | 2 | 0 | |
| Total/ % | 37 | 18 48.648% | 19 51.351% | 15 40.540% | 12 32.432% | 6 16.216% | 6 16.216% | 5 13.513% | 0 0% | 1 2.702% |

Table C-6. Imitation -- Subject C

| Date of Episode | Number of Episodes | Yes | No | Adult | Child | uncertain |
|-----------------|--------------------|--------------|---------------|-------------|-------------|-------------|
| 11/5/84 | 4 | 1 | 3 | 0 | 1 | 0 |
| 11/26/84 | 4 | 1 | 3 | 1 | 0 | 0 |
| 12/10/84 | 1 | 0 | 1 | 0 | 0 | 0 |
| 1/21/85 | 6 | 0 | 5 | 0 | 0 | 1 |
| 2/18/85 | 5 | 1 | 4 | 0 | 0 | 0 |
| 3/18/85 | 7 | 0 | 7 | 0 | 0 | 0 |
| 4/22/85 | 4 | 0 | 4 | 0 | 0 | 0 |
| 1/9/86 | 1 | 0 | 0 | 0 | 0 | 1 |
| 3/6/86 | 2 | 1 | 1 | 0 | 1 | 0 |
| 4/24/86 | 3 | 1 | 2 | 1 | 0 | 0 |
| Total/ % | 37 | 5 13.513% | 30 81.081% | 2 5.405% | 2 5.405% | 2 5.405% |

Table C-7. Distraction -- Subject C

| Date of Episode | Number of Episodes | Yes | No | Frequent/ Sustained |
|-----------------|--------------------|---------------|--------------|------------------------|
| 11/5/84 | 4 | 3 | 1 | 2 |
| 11/26/84 | 4 | 4 | 0 | 2 |
| 12/10/84 | 1 | 1 | 0 | 1 |
| 1/21/85 | 6 | 6 | 0 | 2 |
| 2/18/85 | 5 | 5 | 0 | 2 |
| 3/18/85 | 7 | 5 | 2 | 4 |
| 4/22/85 | 4 | 4 | 0 | 2 |
| 1/9/86 | 1 | 1 | 0 | 0 |
| 3/6/86 | 2 | 1 | 1 | 1 |
| 4/24/86 | 3 | 2 | 1 | 0 |
| Total/ % | 37 | 32 36.486% | 5 13.513% | 16 43.243% |

APPENDIX D

Tables D-1 through D-7

Table D-1. Location of Activities -- Subject D

| Date of Episode | Number of Episodes | Clay/dough | Easel | Collage/Art | Chalk-board | Pencil Sharpener | Other |
|-----------------|--------------------|--------------|--------------|--------------|-------------|------------------|-------|
| 11/5/84 | 2 | 0 | 1 | 0 | 1 | 0 | 0 |
| 11/26/84 | 3 | 3 | 0 | 0 | 0 | 0 | 0 |
| 12/10/84 | 4 | 1 | 1 | 2 | 0 | 0 | 0 |
| 1/21/85 | 5 | 1 | 0 | 4 | 0 | 0 | 0 |
| 2/18/85 | 3 | 1 | 1 | 1 | 0 | 0 | 0 |
| 3/18/85 | 4 | 3 | 1 | 0 | 0 | 0 | 0 |
| 4/22/85 | 2 | 0 | 0 | 1 | 1 | 0 | 0 |
| 11/13/85 | 2 | 0 | 1 | 1 | 0 | 0 | 0 |
| 12/11/85 | 2 | 1 | 0 | 1 | 0 | 0 | 0 |
| Total/ % | 27 | 10 37.03% | 5 18.518% | 10 37.03% | 2 7.407% | 0 | 0 |

Table D-2. Activities -- Subject D

| Date of Episode | Number of Episodes | Watching Only | Using material/ tool only | Manipulating tool only | Organizing tools/ materials | other |
|-----------------|--------------------|---------------|------------------------------|------------------------|--------------------------------|-------------|
| 11/5/84 | 2 | 0 | 2 | 0 | 0 | 0 |
| 11/26/84 | 3 | 0 | 3 | 0 | 0 | 0 |
| 12/10/84 | 4 | 1 | 2 | 0 | 0 | 1 |
| 1/21/85 | 5 | 0 | 3 | 1 | 0 | 1 |
| 2/18/85 | 3 | 0 | 3 | 0 | 0 | 0 |
| 3/18/85 | 4 | 0 | 4 | 0 | 0 | 0 |
| 4/22/85 | 2 | 0 | 1 | 1 | 0 | 0 |
| 11/13/85 | 2 | 0 | 2 | 0 | 0 | 0 |
| 12/11/85 | 2 | 1 | 1 | 0 | 0 | 0 |
| Total/ % | 27 | 2 7.407% | 21 77.78% | 2 7.407% | 0 | 2 7.407% |

Table D-3. Immediate Presence of Others -- Subject D

| Date of Episode | Number of Episodes | Yes | No | Adult | Child | Adult & Child |
|-----------------|--------------------|--------------|--------------|--------------|--------------|---------------|
| 11/5/84 | 2 | 2 | 0 | 0 | 0 | 2 |
| 11/26/84 | 3 | 3 | 0 | 2 | 0 | 1 |
| 12/10/84 | 4 | 3 | 1 | 2 | 1 | 0 |
| 1/21/85 | 5 | 4 | 1 | 1 | 2 | 1 |
| 2/18/85 | 3 | 3 | 0 | 1 | 0 | 2 |
| 3/18/85 | 4 | 3 | 1 | 0 | 0 | 3 |
| 4/22/85 | 2 | 1 | 1 | 0 | 0 | 1 |
| 11/13/85 | 2 | 1 | 1 | 0 | 0 | 1 |
| 12/11/85 | 2 | 2 | 0 | 0 | 1 | 1 |
| Total/ % | 27 | 22 81.48% | 5 18.518% | 6 22.222% | 4 14.814% | 12 44.44% |

Table D-4. Watching -- Subject D

| Date of Episode | Number of Episodes | Yes | No | Adult | Child | Adult & Child |
|-----------------|--------------------|--------------|-------------|-------------|--------------|---------------|
| 11/5/84 | 2 | 2 | 0 | 1 | 1 | 0 |
| 11/26/84 | 3 | 3 | 0 | 2 | 1 | 0 |
| 12/10/84 | 4 | 3 | 1 | 0 | 2 | 1 |
| 1/21/85 | 5 | 4 | 1 | 1 | 1 | 2 |
| 2/18/85 | 3 | 2 | 1 | 0 | 1 | 1 |
| 3/18/85 | 4 | 2 | 2 | 2 | 0 | 0 |
| 4/22/85 | 2 | 0 | 2 | 0 | 0 | 0 |
| 11/13/85 | 2 | 0 | 2 | 0 | 0 | 0 |
| 12/11/85 | 2 | 2 | 0 | 0 | 1 | 1 |
| Total/ % | 27 | 18 66.66% | 9 33.33% | 6 22.22% | 7 25.925% | 5 18.518% |

Table D-5. Verbal Interaction -- Subject D

| Date of Episode | Number of Episodes | Yes | No | Other to Subject | Adult | Child | Subject to Other | Adult | Child | Other |
|-----------------|--------------------|--------------|-------------|------------------|-------------|-------------|------------------|-------------|--------------|-------------|
| 11/5/84 | 2 | 2 | 0 | 1 | 1 | 0 | 2 | 2 | 0 | |
| 11/26/84 | 3 | 2 | 1 | 2 | 2 | 0 | 2 | 2 | 0 | |
| 12/10/84 | 4 | 3 | 1 | 3 | 2 | 1 | 1 | 1 | 0 | |
| 1/21/85 | 5 | 3 | 2 | 3 | 2 | 0 | 2 | 1 | 0 | 1 |
| 2/18/85 | 3 | 3 | 0 | 2 | 2 | 0 | 2 | 1 | 2 | (herself) |
| 3/18/85 | 4 | 2 | 2 | 0 | 0 | 0 | 2 | 1 | 0 | |
| 4/22/85 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11/13/85 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | |
| 12/11/85 | 2 | 2 | 0 | 1 | 0 | 1 | 2 | 1 | 1 | |
| Total/ % | 27 | 18 66.66% | 9 33.33% | 13 48.15% | 9 33.33% | 3 11.11% | 14 51.85% | 9 33.33% | 4 14.814% | 1 3.703% |

Table D-6. Imitation -- Subject D

| Date of Episode | Number of Episodes | Yes | No | Adult | Child | uncertain |
|-----------------|--------------------|--------------|--------------|--------------|--------------|-------------|
| 11/5/84 | 2 | 1 | 1 | 1 | 0 | 0 |
| 11/26/84 | 3 | 0 | 3 | 1 | 0 | 0 |
| 12/10/84 | 4 | 2 | 2 | 1 | 1 | 0 |
| 1/21/85 | 5 | 0 | 4 | 0 | 0 | 1 |
| 2/18/85 | 3 | 1 | 2 | 1 | 0 | 0 |
| 3/18/85 | 4 | 0 | 4 | 0 | 0 | 0 |
| 4/22/85 | 2 | 0 | 2 | 0 | 0 | 0 |
| 11/13/85 | 2 | 0 | 2 | 0 | 0 | 0 |
| 12/11/85 | 2 | 1 | 1 | 1 | 0 | 0 |
| Total/ % | 27 | 5 22.222% | 2 74.071% | 4 14.814% | 1 3.0703% | 1 3.703% |

Table D-7. Distraction -- Subject D

| Date of Episode | Number of Episodes | Yes | No | Frequent/ Sustained | Uncertain |
|-----------------|--------------------|--------------|--------------|------------------------|-------------|
| 11/5/84 | 2 | 1 | 1 | 1 | 0 |
| 11/26/84 | 3 | 2 | 1 | 2 | 0 |
| 12/10/84 | 4 | 3 | 1 | 3 | 0 |
| 1/21/85 | 5 | 5 | 0 | 1 | 0 |
| 2/18/85 | 3 | 2 | 1 | 1 | 0 |
| 3/18/85 | 4 | 3 | 0 | 1 | 1 |
| 4/22/85 | 2 | 0 | 2 | 0 | 0 |
| 11/13/85 | 2 | 1 | 1 | 1 | 0 |
| 12/11/85 | 2 | 1 | 1 | 0 | 0 |
| Total/ % | 27 | 18 66.66% | 8 29.629% | 10 22.22% | 1 3.703% |

APPENDIX E

**First version of check sheet
used in reviewing data**

APPENDIX E**SUBJECT OBSERVATION SHEET**

Tape _____ Others involved in interaction _____
 Date of Observation _____
 Episode # _____ Initiator of episode _____
 Subject _____
 Location _____
 Materials Used _____

PRELIMINARY

Observes other prior to entering area
 Enters art area when other is present
 Brings other into area
 Accompanies other into area
 Follows other into area
 Comments re: initiation

WATCHING

Watches use of material/tool by child
 Watches use of material/tool by adult
 Watches while subject uses material/tool
 Watches while subject does not use material
 Comments re: watching

WORKING TOGETHER

Works beside other
 Works together with other on same surface/project
 Helps other in getting tools/supplies
 Helps/shows other "how to" make/do with material/tool
 Quality of exchange/interaction: active, passive, active/passive
 Comments re: Quality of interaction

TALKING/GESTURING

Talks to adult while subject uses material/tool
 Talks to child while subject uses material/tool
 Talks to adult while subject does not use material/tool
 Talks to child while subject does not use material/tool
 Talks about material/tool/work
 Does not talk about material/tool/work
 Asks for/indicates need to; other for assistance
 with use of material/tool
 in getting material/tool
 with image
 Invites other to work too
 Instructs other in what/how to make
 Responds verbally/with gesture to work of other
 Comments re: Talk/gesture

CONCLUSION

Assists other in clean-up
 Interacts with other re:
 putting name on paper/project
 putting away or hanging piece/project

PLAYING

Engages in same game/play/fantasy as other
 With tool/material
 Comments re play:

IMITATION/COPYING

Copies gesture/movement
 Copies tool/material use
 Copies image
 Copies verbal comment of other
 Comments re imitation/copying

DISTRACTION

Looks away from centre/activity as result of other
 Leaves centre/activity as result of other
 Comments

EXTENSION

Comments on extension/length of interaction with material/tool as result of other

ADULT OBSERVATION

Initiates episode
 Invites child to join
 Sits in area in order to attract child
 Sits beside or near subject
 Accompanies subject to area
 Watches subject use material/tools
 Talks to subject while subject uses material/tools
 Responds verbally to subjects work/use of materials/tools
 Uses material/tool
 Shows subject "how to"
 copies subject
 verbally
 image
 gesture/movement
 Assists subject by
 getting materials/tools
 organizing materials
 adjusting seat, etc.
 Writes subject's name on paper
 Puts away or hangs work for subject
 Engages in play/fantasy with subject
 verbal
 with material
 Creates parts of piece to include in subject's piece
 Works at subjects request
 Instructs/helps subject in clean-up

APPENDIX F

**Second version of check sheet
used in reviewing data**

APPENDIX F

CHILD ART STUDY

CHECK SHEET / TAPE ANALYSIS

Tape # _____ Date of Observation _____ Subject _____
 Location _____ Materials Used? _____
 Others involved _____ Watching only? _____

H₁ Immediate
 Presence of other(s) during episode:
 Yes No
 During entire episode
 During part of episode
 Child who? _____
 Adult who? _____

Comments _____

H₂ Watching/observing others use of materials
 Yes No
 If yes, child who? _____
 adult who? _____

Comments _____

H₃ Verbal interaction during episode about use of material or product.
 Yes No
 If yes, child who? _____
 adult who? _____

frequency of "subject" comments
 frequency of "other" comments

Comments _____

H₄ Evidence of imitation/copying during episode.
 Yes No

If yes, what? (gesture, image) _____

If yes, who? Adult _____

Child _____

Comments _____

H₅ Evidence of Looking away/distraction during episode.
 Yes No

If yes, frequency:

If yes, cause of distraction:

H_{6a} Comment/importance of other presence during episode.

H_{6b} Comment/intensity of involvement with material.