

THE UNIVERSITY OF ALBERTA  
NONVERBAL COMMUNICATION IN EARLY CHILDHOOD  
EDUCATION

BY



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## ABSTRACT

Teachers and parents of young children cannot always know by what a child says how he feels about the situation in which he finds himself. His verbal response often reflects his perception of adult expectations. What he does may be a better indicator of his real feelings than what he says.

This study was undertaken to ascertain the quantity and quality of nonverbal communication which takes place in an early childhood educational setting and the implications of such information for further research and for teacher training programs.

The study evolved into four stages: (1) the preliminary studies, (2) the actual observations, (3) the analysis and categorization of data, and (4) the examination of the findings.

The preliminary studies became four phases and involved seven children and one mother. They revealed necessary changes in the original design. These included the refining of observational techniques, changing of quantitative and qualitative categories, and deletion of some questions from the mother's interview.

The actual observations entailed observing each of four children for approximately one hour twice a week for two weeks. Every nonverbal cue observed was recorded. These raw data were categorized quantitatively and qualitatively and then became the basis for describing each child's nonverbal communication. Included in each description is

the mother's view of the child's nonverbal communication from his birth to the present and the teacher's view of the child's nonverbal communication during the months he has attended kindergarten, as revealed by taped interviews.

The conclusions indicate that nonverbal communication appears to be the mode through which the child communicates his real feelings. This implies that: (1) there is a need for further research in this area, (2) strong parent-teacher relationships are essential in the child's early years, and (3) as more information becomes available regarding the observation and interpretation of nonverbal communication, teacher education institutions should include this aspect of human behaviour in their early childhood education programs.

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## CHAPTER 1

### I. INTRODUCTION

A child sitting in silence may be labelled 'good' by a well intentioned teacher. Acceptable academic performance may mask bottled up emotions which can erupt at a later stage and result in learning disabilities which necessitate removal from the regular classroom to a special treatment centre. Often the seeds of such disabilities have been sown in the child's earliest months, but the classroom teacher, untrained to recognize symptoms of disturbance, may inadvertently aggravate rather than attempt to alleviate or remedy the situation.

Fabun states that:

We are social creatures and our society is made up of responses to each other...we are in constant need of reassurance that those other creatures out there are friendly not hostile (Fabun, 1970, p. 20).

If there is need among adults for such reassurance, how much greater is the need for the young child entering his first educational institution? Indication that this need is not being adequately met for many Canadian children is substantiated by the CELDIC REPORT (Commission on Emotional and Learning Disorders in Children) which states that one million Canadian children suffer from emotional problems severe enough to cause learning disabilities. It further states that:

No longer should we tolerate the compounding of problem upon problem because we are too busy or too

blind to make help immediately available to a child when difficulty first arises. We must not continue or present emphases on 'moping up' instead of 'fixing the leak' (Celdic Report, p. 469).

### Relationship Between Nonverbal Cues and Emotional Meaning

Studies of people with problems in interpersonal and intrapsychic adjustment reveal that, "almost all of life is influenced by nonverbal stimuli . . . . These impinge on individuals whether they are aware of it or not (Davitz, 1964, p. 201)." Davitz further substantiates the relationship between nonverbal interaction and emotional meaning when he states that his studies lead him to suspect that it is:

.....the nonverbal form or formal characteristics of one's environment, the 'style' of the people and things that surround us that primarily determine the meaning of one's world (Davitz, p. 201).

### Nonverbal Interaction in the Classroom

Galloway (1968) finds a relationship between what the teacher does in the classroom and the emotional state of the child. Pupils make interpretations and inferences from both verbal and nonverbal cues, and often discover incongruencies.

When there is incongruency between the verbal and nonverbal, the students are troubled by the dilemma and see through to the teacher's real self (Galloway, p. 174).

The child assumes that the nonverbal is consonant with the real feelings of the teacher. Because the teacher is a significant person in the life of the young child, his

actions will affect the child's view of himself. Thus non-verbal interaction can aid or hamper the development of the self concept of the child.

Teachers check the validity of a child's verbal response through the nonverbal cues he emits but the fact that the child simultaneously reads the teacher's nonverbal cues is frequently overlooked. Galloway insists that the teacher must become aware of this nonverbal feedback in order to understand the child's feelings about what is happening in the classroom (Galloway, p. 172). Such growth in awareness could lead to recognition and alleviation of emotional disturbances before they cause serious learning disabilities.

## II. THE PROBLEM

### Background to the Problem

Scott (1968) indicates that the early years are "critical periods for learning (p. 130)" and that such learning is related to the development of an emotional attachment to particular surroundings. In such an environment the child grows confident and becomes able to organize his behavior. Each step toward organization of the behaviour leads to growth in confidence. A cyclic process results which increases power to control behaviour and further adds to the concept of self.

Dinkmeyer regards a healthy self concept as essential to learning and while the development of this concept is a

lifelong process the foundations for its growth are laid in the early years. As the child moves from home to school the teacher becomes an important element in the growth of the child's self concept because the child's view of himself is affected by his perception of how the teacher views him (Dinkmeyer, 1965).

As Galloway has pointed out, the teacher's nonverbal cues will be interpreted as the teacher's real feelings toward the child and the child's nonverbal feedback will reveal to the teacher his emotional state.

#### The Problem

The problem was to review the literature on nonverbal interaction and to develop techniques to describe quantitatively and qualitatively the nonverbal interaction which takes place in an early childhood educational setting.

Questions that this research has attempted to answer are:

1. Is the quantity of nonverbal communication in early childhood education significant?
2. With whom does the child interact most frequently through the nonverbal mode?
3. Is nonverbal communication related to the affective domain of the child?
4. Is there a relationship between the classroom situation and the amount and quality of nonverbal communication?

5. Does a mother perceive nonverbal cues and relate them to the feelings of her child?

6. Does a teacher of young children perceive the child's nonverbal cues and relate them to the child's emotional state?

7. Are there congruencies in the mother's and teacher's perception and interpretation of the nonverbal communication of the child?

8. Are there incongruencies between the teacher's and the mother's perception and interpretation of the nonverbal communication of the child?

9. Can an objective observer discover patterns of nonverbal behaviour of a child in an early classroom setting?

10. Are the perceptions of such an observer congruent or incongruent with those of the mother and teacher?

11. What are the implications of the findings of this study for early childhood education?

### III. DESIGN

Helmstadter (1970) states that the individual case study method is essential in exploring new fields. Piaget, Brown and Bellugi, and Sears and Sherman (1964) have used this method successfully. Therefore the individual case study method was chosen for this research.

### Subjects

Subjects for the pilot study were one first grade female child in a public school, and six kindergarten children in a parent co-operative kindergarten. Subjects for the actual study were four five year old children from the same kindergarten.

### Pilot Study

#### Phase 1:

To determine whether the nonverbal communication of a teacher and child in an educational setting could be recorded manually by a researcher, a child was observed for 12 minutes and every nonverbal cue emitted was recorded.

#### Phase 2:

To refine observational techniques and to determine categories of nonverbal behaviours, four kindergarten children were observed for periods varying from 12 to 16 minutes each. Every nonverbal cue that was observed was recorded and categorized.

#### Phase 3:

To check the researcher's reliability of perception and accuracy of categorization, a trained observer and the researcher made simultaneous observations of two children. Cues recorded were enumerated and categorized independently and without knowledge of the other's judgments. The percentage of agreement was calculated using the following formula:

Number of Agreements

Number of agreements + number of disagreements  
(Childhood Education, Feb. 1968, p. 403)

Data

Each subject was observed individually for a total of four hours and every nonverbal cue emitted was recorded. Following the observations each mother was interviewed privately, and the responses were taped and transcribed. Following the interviews with mothers, the teacher was interviewed four times and her responses were taped and transcribed.

Description of Data

1. Each hour of observation was divided into communication events.
2. Nonverbal cues were enumerated in each event and categorized as child-teacher, child-child, child-group, child-self, child-observer, child-self-environment, and combinations of these categories.
3. Each nonverbal cue was described qualitatively as symbolic or nonsymbolic; attentive or inattentive; and interpersonal or intrapersonal.
4. Nonverbal cues emitted in conjunction with or for the purpose of emphasizing verbal emissions were described as 'qualifying expression'.
5. Nonverbal cues emitted in response to a verbalization or a nonverbal cue were described as positive or



negative responses.

6. Data were further described according to the situation in the classroom at the time of occurrence.

#### IV. LIMITATIONS

1. No attempt is made to generalize from individual case studies. The purpose of the study is to describe nonverbal communication quantitatively and qualitatively in an early childhood education setting.

2. No comparison of subjects is made. Emphasis is on totality of individual interaction and its emotional meaning within the individual child.

3. Child-teacher interaction may have been affected by the presence of the researcher. To minimize this effect the researcher visited the kindergarten four mornings as a passive observer prior to beginning the actual observations. In addition it must be noted that this kindergarten has many visitors including students from the University.

4. The personality of the researcher, her emotional state at the time of the observations, and her ability to record and categorize behaviours objectively were recognized as major limitations. To minimize these limitations a certified teacher accompanied the researcher as a judge of reliability during phase 3 of the pilot study.

5. Mother's responses, although given sincerely, may be inadequate due to faulty recall regarding the early life of the child.

6. Teacher personality and unconscious biases may affect her responses during the interview.

## V. DEFINITIONS

### Early Childhood

Early childhood is considered to be the period

.....from the advent of speech and mobility to the beginning of the stage in which the child becomes capable of more concrete thought. This approximates the period between ages three to eight for most children (Affleck and Turner, 1971).

### Early Childhood Education

Early childhood education represents all learning which takes place in an environment designated as educational during the period of early childhood.

### Communication

Communication is behaviour which imparts information or ideas.

### Interaction

Interaction is communication in which there is an elicitation and a response.

### Communication Event

A communication event is a sequence of interaction separated from preceding and succeeding sequences of interaction by defined boundaries. In this study these boundaries are change of teacher or child direction, interruption by other members of the class, change of

program routine, and unexpected external interruption.

### Nonverbal Communication

Nonverbal communication is communication which excludes vocalization.

### Nonverbal Cue

A nonverbal cue is a single nonverbal act.

### Intrapersonal Cue

An intrapersonal cue is one which indicates that the subject is communicating with himself.

### Interpersonal Cue

An interpersonal cue is one directed toward another person.

### Responsive Cue

A responsive cue is one emitted in response to direction, action or verbalization of another person.

### Symbolic Cue

A symbolic cue is a nonverbal act carried out deliberately.

### Nonsymbolic Cue

A nonsymbolic cue is a nonverbal cue emitted without conscious deliberation or conscious thought.

### Attentive Cue

An attentive cue is a nonverbal cue which reveals

concentration upon a task.

#### Inattentive Cue

An inattentive cue is a nonverbal cue which indicates lack of concentration on the task.

#### Qualifying Expression

A qualifying expression is a nonverbal cue which qualifies a verbal utterance.

### VI. ORGANIZATION OF THE STUDY

Chapter one has introduced the topic under study and has described the problem and the design and organization of the study.

Chapter two summarizes the literature that has been researched pertaining to the topic and the individual case study method.

Chapter three describes the preliminary and pilot studies and the resulting changes in the design. Chapter four describes the setting of the study. Chapters five, six, seven, and eight describe the four children, Billy, Mary, Betty and Frank. Each chapter describes the early life of the child and his nonverbal behaviour at home and at school at age five.

The final chapter examines the findings of nonverbal behaviour in early childhood as related to the affective domain and the implications of this information for the education of young children.

## CHAPTER 2

### A REVIEW OF THE RELATED LITERATURE

The literature is reviewed under the following headings.

1. Methods of Obtaining Data on Nonverbal Communication.
2. The Relationship Between Nonverbal Communication, Emotional Stability and Learning.
3. Dimensions of Nonverbal Communication which aid Analysis and Categorization.
4. Instruments for Analyzing Nonverbal Cues according to Emotional Meaning.
5. Current Research.

#### Methods of Obtaining Data on Nonverbal Communication

The instruments used in studying nonverbal communication no doubt affect the findings. Buzby (1924) used the Piderot profile which is a model of a human face to which parts can be added in different positions. He concluded that the eye and brow are more important conveyors of feelings than the mouth. Ruckmick (1921), using two sets of photographs, concluded that the lower half of the face provided the dominant cues.

Langfield (1918) and Allport (1924) used Rudolph's still, posed photographs and asked judges to identify the

emotion expressed without knowledge of the situation at the time of posing. Goodenough (1931) photographed a ten month old infant in eight different emotional situations and asked judges to identify emotions.

A number of researchers used unposed photographs to reduce artificiality of the stimuli. These included Schultze (1912), Munn (1940) and Hanawalt (1944). However the results varied little from studies using the posed photographs. Information was lost when expressions changed and such changes could not be captured. In 1938 Dusenberry and Knowler began the use of motion picture in an attempt to overcome this limitation.

After extensive study and many attempts to develop techniques for objective recording and analysis, Birdwhistell (1970) concluded that although motion picture recording had made studies more intensive and reliable

...no mechanical contrivance, however elaborate and precise can be more than a supplement to the trained observer; the camera cannot substitute for the trained eye (p. 50).

In summary, methods of obtaining data on nonverbal communication have changed from the use of posed still photographs to spontaneous still photographs, to the use of moving pictures. Birdwhistell, who has conducted some of the most extensive studies in the field, returns to the trained eye of an observer as the most efficient method. Therefore this method was used in this study.

Relationship Between Nonverbal Communication,  
Emotional Stability and Learning

Because the study is concerned with the revelation of the emotional state of an individual through his nonverbal communication in an early childhood educational setting the pertinent literature was reviewed.

In 1896 Darwin began the study of emotions as revealed through facial expressions (Davitz, 1964).

Travers (1965) stressed the physiological relationship between emotions and the body for he stated that "emotions are not feelings as formerly thought. They are bodily responses of a predominantly visceral nature." These responses are triggered by environmental stimuli. The psychological aspect of emotions can, according to Travers, be classified in three discernable ways:

1. The feelings which the person experiences due to the body response. Scholsberg (1965) places these on continuums from pleasant to unpleasant and from attention to rejection.
2. The visceral element of emotion is difficult to discern but has been noted through changes in blood pressure, pulse rate and pallor.
3. "Skeletal behaviour" is when the individual expresses his emotion through a physical response, e.g., happiness may be expressed through laughter or dancing, anger by clenched fists.

Kaplan (Travers, 1965) and Taylor (1967) indicate

that emotions may be positive or negative and that while strong negative reactions can hinder learning and inhibit thought processes, positive emotions aid learning and recall. Taylor emphasizes the importance of emotions to learning when she states that:

Emotion not only stimulates thought but to a large extent determines its quality and content. It is the feelings in any situation that furnish the drive for the direction of our own thoughts....Since emotions are so potent in shaping thought, it might even be appropriate to speak of "emotional hygiene" rather than "mental hygiene" (Taylor, 1967, p. 66).

Good emotional hygiene is synonymous with a growing realistic self concept. Lecky (1945) pioneered the study of the relationship between self concept and school performance and concluded that "low academic achievement may be related to a student's conception of himself as being unable to learn academic material (Hamachek, 1971, p. 176)."

Wattenberg and Clifford (1964) found that in many children "an unfavorable view of self" is already established before they enter first grade. They found that the "self attitudes" of children in kindergarten were better predictors of reading potential than were the scores on intelligence tests.

There seems to be no doubt that the concept of self is related to learning and learning difficulties. Sears and Sherman warned, however, that although a unifying concept of one's 'self' is needed for "effective performance" there is a danger that if this concept becomes very rigidly defined, "there is little flexibility for change or for appreciation



of others with different talents (Sears and Sherman, 1964, p. 268)." Travers (1970) also indicated that there is need for caution when relating emotional disturbance and learning problems because "emotional disturbance rather than being either the cause or effect may be both cause and effect." Bateman (1966) stated that "emotional disturbances are not necessarily an obstacle to learning (Travers, 1970, p. 313)."

Jersild points out in his book, In Search of Self, that when a learner finds a task which is significant to him there is self involvement which brings about a psychological reorganization. However, a child

...for the sake of peace may go through certain motions, undertake certain drills, in order to rattle off the names of states or do certain calisthenic stunts. There may be learning in which there is no self-involvement (Jersild, 1952, p. 99).

He indicts the kind of education in which:

...children find the educational scene so filled with failure or so full of reminders of their limitations, and so harsh in giving those reminders, that they hate school. School is such a threat to their self-picture that it is almost intolerable, but they drag themselves back to school day after day because the alternative of not going would be even more painful and threatening (Jersild, 1952, pp. 99-100).

Travers indicates that emotions are expressed through body response. Kaplan (1965) and Taylor (1967) found that emotions stimulate thought and are basic determinants of the quality of such thought. Jersild (1952) emphasized that success or failure in learning affects the self concept of the child which in turn affects learning. Hence, it seems evident that there is a relationship between nonverbal communication and the emotional state which has an

effect on the individual's ability to learn.

Dimensions of Nonverbal Communication which  
Aid Analysis and Categorization

The literature revealed that dimensions of nonverbal communication which have been described are time, space, travel, situation, sex, and body language.

Time

The time during which a nonverbal cue is emitted has meaning. Hall (1969), in his book, The Silent Language coined the phrase, "time talks". Galloway (1968) states, "How teachers use their time indicates the value and importance they place on types of work, subject areas, and acceptable activities (p. 39)."

Space

Hall, in his studies of various cultures, concluded that "space speaks". He found that the French, English, Greek and Navajo people have their own particular way of handling social distance. In the society of our schools Galloway points out that the classroom is divided into territories. Teacher and pupils have space. Some of the teacher's space is almost a territorial right, for example the desk at the front of the room. "Some uses of space are fluid, others are static (Galloway, 1968, p. 39)" The priorities of the teacher can be clearly defined by spatial arrangement. They indicate how she feels about the children

and how she envisions herself in relationship to them. Galloway concludes that, "A change in spatial arrangement influences the potential meaning of a learning context (p. 39)."

### Travel

Within the space that individuals occupy, they move. Movement toward or away from the person with whom one is communicating is a nonverbal means of conveying feeling about that person. Galloway applies this principle to the classroom and points out that teacher travel is related to time and space. "Where and when a teacher chooses to travel ...is significant (Galloway, 1968, p. 39)."

### Situation

The culture into which a child is born, his social class and status, as well as his situation at a given time have been studied and found to influence the quantity and quality of nonverbal interaction. Birdwhistell reports that the Kutenai Indians of British Columbia could read the posture of a man approaching to determine whether he was a white man or an Indian, "far beyond the point where features were at all distinguishable (Birdwhistell, 1970, p. 28)."

Mehrabian points out that social class may influence nonverbal communication both quantitatively and qualitatively.

...upper-middle or upper-class Americans...often express their experience in the verbal-content channel and minimize the use of tonal or gestural communication channels (Wiener and Mehrabian, 1968, p. 59).

Bernstein (1965) and Duetch, Malwer, Brown and Cherry (1964)

substantiate the view that children and adults in the so called deprived situations use expressive movements or touching as the primary mode of communication (Wiener and Mehrabian, p. 59).

### Sex

Birdwhistell (1970) reports that after working with people from seven different societies, Chinese, middle and upper class London British, Kutenai, Shushwap, Hopi, Parisian, French and American, it became clear that natives of each society could distinguish "male movement from female movement" was related to the situation (p. 43). All of his informants looked upon these differences as "instinctually and biologically based." No research has been found to indicate at what age the awareness of these differences develops.

### Body Language

While early studies inferred that only the face and particularly the mouth was involved in the act of smiling, Birdwhistell (1970) points out that a smile includes not only the facial areas but other parts of the body:

Careful observation may reveal that this behaviour may be accompanied by a movement of the scalp. The head may or may not be tilted...shoulders and arms may or may not be involved. The trunk too...may at times be seen to move. The hips may or may not be involved...the legs and feet can be seen to move in regular and characteristic ways (Birdwhistell, 1970, p. 34).

Thus Birdwhistell bridges the gap between research regarding facial areas and the remainder of the body as related to the

expression of emotional meaning through nonverbal means. If the entire body can be part of communicating the meaning of a smile, it would seem that body movement could also communicate other feelings.

Birdwhistell (1970), after carrying out extensive study of smiles, concluded that a nonverbal communication such as a smile is not universally related to happiness and satisfaction but that in some situations and in some parts of the world a smile may indicate equality, doubt, acceptance, superordination or subordination. This no doubt applies to other areas of the face such as the eyes and the brows for Hall (1969) points out that to lower the eyes is to the Hopi people a mark of respect while in American culture it is frequently looked upon as a sign of guilt, disrespect or shame.

The literature suggests that dimensions of time, space, travel, situation, sex and body language must be considered in a study of nonverbal communication.

#### Analyzing and Categorizing Nonverbal Cues

##### According to Emotional Meaning

As interest in nonverbal communication has grown researchers have become involved in attempts to categorize and map it so that data secured might be interpreted in scientific ways.

Ruesch and Kees (1966) divided the nonverbal world into sign language in which a gesture such as a hitchhiker's

thumb replaces words; action language which is meaning communicated unintentionally through body movement; and object language which includes all material things that convey meaning, for example the human body, clothing, furniture, a wedding ring.

Victoria (1971) found that data obtained placed nonverbal behaviour into two general categories transactional and nontransactional, within a teacher-learner interaction. The teacher's nonverbal behaviour is transactional when used consciously or unconsciously to have a direct influence on the students. It is nontransactional when there is no conscious control and the behaviour reflects the teacher's "inner state and attitude toward students (Victoria, 1971, p. 302)." Transactional behaviours are largely gestural and, according to Victoria, are, "inter-active and spatial referents" and nontransactional behaviour, while gestural, serves as an "image reflecting referent."

During the past decade, researchers have devised instruments to categorize and describe teacher nonverbal communication but similar studies of child nonverbal communication in the classroom have just begun. Galloway categorizes the child's behaviours as substitute expression; qualifying expression; nonverbal-symbolic; nonverbal-nonsymbolic; attentive or inattentive (Galloway, 1968, pp. 39-39).

## CURRENT RESEARCH

Berman and Roderick (1971) report that research is continuing in an attempt to understand the meaning and implications of nonverbal communication. Berman stresses that the research is not intended to develop curriculum but that:

...the interactive situation between the child and the teacher evidences the greatest opportunities for learning certain of the fundamental processes of life (Berman, 1971, p. 5).

Roderick reports that research begun in the Department of Early Childhood Education at the University of Maryland in 1970 dealing with nonverbal behaviour of 3 to 5 year olds as related to their decision making behaviour is continuing. It will examine the nonverbal behaviour which occurs in the classroom during the free play period and the relationship between these nonverbal behaviours and decision making (Roderick, 1971). The individual case study method, is being used.

French (1971) emphasizes the importance of understanding student nonverbal behaviours as a means of understanding the individual. He states:

...we know that children learn early in the educational process that they are not supposed to communicate verbally the things which really matter to them. Real feelings, values and emotions are not appropriate content for communication in the institutions we call schools. However, we usually do communicate our needs, feelings and values nonverbally (French, 1971, p. 306).

In setting a model for inservice education on nonverbal communication he advocates that teachers should observe and

record specific behaviours of individual children for at least 25 minutes during one week. Information thus obtained should help the teacher to know the child better and to plan individual ways of reaching and teaching him.

This study uses the technique of observation to examine the quantity and quality of individual nonverbal communication patterns in a kindergarten setting.



## CHAPTER 3

### PRELIMINARY STUDIES

The lack of research focused on the child's nonverbal communication in early childhood indicated a need for preliminary studies to determine whether there is sufficient nonverbal communication in early childhood to make a quantitative and qualitative description of this behaviour, to determine the feasibility of recording manually the nonverbal cues emitted by a teacher and a child, and to determine the reliability of a trained observer's ability to record and interpret nonverbal cues that occur in an early childhood education setting.

#### Phase One

A six year old girl was selected in a first grade classroom which the observer had visited many times. The observer had no knowledge of her background. Identity of the subject to be observed was not revealed to the teacher. The child was a member of a class of 27 first grade children.

The teacher called the class to a carpeted area. She stood in front of the children who seated themselves on the carpet facing her. A teacher directed lesson on number concepts ensued. Teacher and child were observed for 12 minutes.

Time point sampling was begun but immediately abandoned. The researcher found it impossible to observe

and record the nonverbal cues of both the teacher and the child. Hence only the situation with regard to the lesson and the nonverbal cues of the child were recorded. The teacher did not speak directly to the child involved, nor did she direct any nonverbal cues to the subject.

During the observation 82 nonverbal cues were emitted by the child. These were divided into 9 communication events, the boundaries of which were determined by the teacher through both verbal or nonverbal change of direction of the lesson and her directions for movement of the children. The 82 cues were categorized as child-teacher, child-self, child-group or child-environment. Qualitatively the cues were categorized as 26 symbolic and 56 nonsymbolic ones. Sixty cues were labelled intrapersonal and 22 interpersonal.

This phase of the preliminary study suggested that children in the early childhood years exhibit many nonverbal cues which can be recorded manually and categorized quantitatively and qualitatively by a trained researcher. It was further found that the position of the researcher affected perception of the nonverbal cues; that it was impossible to record all nonverbal cues of both the teacher and the child; and that time point sampling is not an adequate method of observing behaviour in early childhood settings because the cut off point frequently interrupts important behavioural events.

These findings indicated that in phase 2 the researcher must move about the room as inconspicuously as

possible, the child must be the focus of the study and the teacher's nonverbal behaviour would be recorded only when directed to the subject or the group of which the child was a member.

The rate of emission of nonverbal cues, approximately seven per minute, was greater than had been anticipated. This necessitated shortening the total observation time for each child so that data would not become cumbersome. To study nonverbal interaction in early childhood it seemed appropriate to begin in the middle years of the early childhood period. The second phase of the preliminary study, therefore, was carried out in a kindergarten.

### Phase Two

To refine recording and categorizing techniques, four individual children were observed in the kindergarten. Time was carefully noted, situations were recorded and every nonverbal act of each child observed was recorded. Teacher nonverbal and verbal interaction was recorded when it was directed to the child under study or to the group of which the child was a member.

The children were chosen without knowledge of their background and their identity was not revealed to the teacher. The researcher attempted to remain as inconspicuous as possible, but moved as the child's movement's necessitated. The researcher succeeded in remaining aloof and in avoiding interaction with the children. Subjects and times of observation follow: one girl, 24 minutes; one girl, 16

minutes; one boy, 18 minutes; and one boy, 16 minutes.

The results of phase 2 of the preliminary study necessitated further change in the design of the study. The category child-environment seemed inadequate to describe a child's nonverbal interaction with the physical environment because whenever a child interacted with his environment there was obviously some intrapersonal interaction or self-involvement. Hence the category child-environment was changed to child-self-environment.

Some behavioural events did not lend themselves to the dual categories that had been set up. For example, when the child glanced at the teacher as she worked with a group which excluded him, the interaction became child-teacher-group which is a combination of the original categories child-teacher and child-group. Therefore a new category labelled "combinations" was established. However, because the category child-self-environment was a predominant one, it remained a separate category. Finally, because some children glanced at the observer, a new category child-observer was added.

As the communication events were analyzed it became apparent that the situation in the classroom and the nature of the activities had a profound effect upon the nonverbal interaction. For example, if the observation was taken during a self-directed activity there was often more child-child or child-group interaction. It was necessary, therefore, to vary the time of the one hour observations.

### Phase Three

This phase of the preliminary study was conducted to estimate the researcher's reliability of observation and interpretation of the observations according to the predetermined categories. The quantitative categories were child-teacher, child-child, child-self, child-group, child-observer, child-self-environment and combinations of these. The qualitative categories were nonverbal-symbolic, nonverbal-nonsymbolic; attentive, inattentive; intrapersonal, interpersonal; responsive; and qualifying expression.

A certified teacher who had majored in early childhood education acted as judge. She studied the systems of categorization until she was confident that she could use them with ease. The researcher and the judge then observed simultaneously in the kindergarten. Eighteen minutes were spent observing a five year old girl and 17 minutes were spent observing a five year old boy. The judge and the researcher observed and recorded independently, refraining from interaction and remaining on opposite sides of the subject under observation. The cues recorded were independently categorized. A comparison of the results revealed agreement between the judge and the researcher in 88% of the quantitative categorizations and 78% in the qualitative interpretations. This indicated that the researcher had refined her observation and categorization techniques sufficiently to make reliable objective recordings of the nonverbal behaviour of an individual child in an early childhood

setting.

Most of the disagreements between the judge and the researcher were related to their varying positions in relation to the subject. For example, when the boy was being observed the researcher was on the child's right and the judge on his left. Hence the researcher recorded some cues that occurred on the right, e.g., pulling back the right leg and scratching the right ear. The judge failed to observe these cues but observed others occurring on the left of the subject. This finding supported the notion that position of an observer strongly affects perception of nonverbal behaviour and stressed the importance of the researcher moving, so that the fullest possible view of the child could be maintained at all times. It also delimited the notion that a video camera might be an addition to the study for in this classroom it would be physically impossible to move a video camera as quickly as a researcher can move. In addition the video camera could not be moved among children at play without affecting interaction, nor would it be prepared to peer into corners such as the housekeeping area.

#### Phase Four

After studying parent interviews and attempting to relate them to nonverbal interaction and the affective domain of the child, 70 questions were chosen. A preliminary interview with the mother of a four year old revealed that the number of questions would be too exhausting and that mothers recall more accurately the events in the early

life of their first born than those of later children. Therefore the questions which proved most difficult to recall were deleted and the child's ordinal position in the family became an important element to be considered when analyzing data obtained from the interviews with the mothers.

#### Summary of the Preliminary Study

The preliminary study indicated that there is an abundance of nonverbal behaviour by children in an early childhood educational setting, that it is possible to record these behaviours manually, and that a trained observer can record and categorize the cues obtained objectively and reliably. It further indicated necessary changes in quantitative categories, and the importance of the researcher's position in relation to the subject. Finally, the preliminary study resulted in the mother's interview being limited to the 50 questions that lent themselves to the most accurate recall and that were particularly pertinent to nonverbal communication in early childhood and its relationship to the emotions.

## CHAPTER 4

### THE SETTING OF THE STUDY

#### The School

The kindergarten is housed in an elementary school which serves grades one through six. The school is situated in an upper middle class suburb of the city where many of the parents are professionals.

#### The Administration of the Kindergarten

This is one of several parent co-operative kindergartens that has gained permission from the public school board to use a vacant classroom. In addition, the kindergarten class is allowed limited use of the gymnasium. The school board offers this accommodation rent free to parents who organize the kindergarten.

A parent executive levies a fee of \$20.00 per month, selects and pays the teacher and, purchases necessary equipment and supplies. Permission of this parent executive was necessary before the study could begin. This was unanimously granted.

#### The Classroom

The classroom is of a regular classroom size and is situated near the entrance used by the primary grades. There is no classroom adjacent to it and the room across the hall is vacant.

Although the area of the room is less than adequate



for the number of children and there is little space for ongoing interest centres, the teacher, aware of the limitations, utilizes the space to good advantage. Equipment and supplies are adequate. (See following diagram.)

### The Teacher

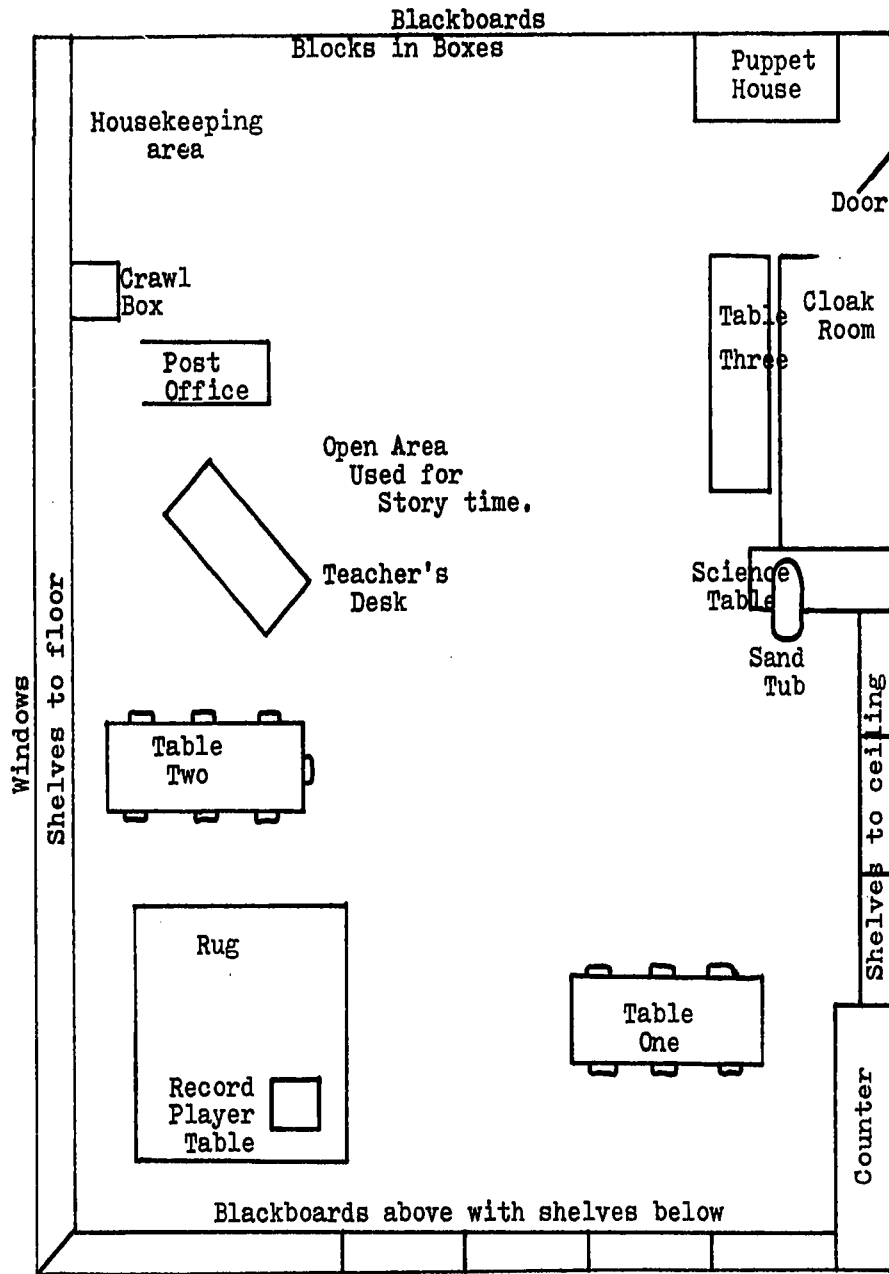
Mrs. Brown\* is an enthusiastic early childhood educator who is currently completing her Bachelor of Education degree in elementary education with a major in early childhood. Fifty-two years old and the mother of three children she has two married daughters and a 15 year old son at home. She has had extensive experience in working with young children. Her teaching career began in a one room rural school where she taught grades 1 to 9 inclusive. Subsequent to her experience in the public school system, she acted as an assistant in a private kindergarten for five years prior to returning to university to further her education. Her special interest this term has been a study of how the "key vocabulary" approach to reading may be used in the kindergarten.

### The Aides

Mrs. Brown has had as aides teams of sixteen and seventeen year old girls who are enrolled in a child care

\* The actual names of the teacher, the aide, the four children and their parents are not revealed and are being substituted with fictitious names.

DIAGRAM OF THE CLASSROOM\*



= small chair

\* not to scale

program at The Wagner Vocational School. Each team remained for a period of six weeks. Mrs. Brown is enthusiastic about their contribution to her program. For the duration of the study, one aide, Marie, worked with the teacher.

### The Children

The class consists of 9 girls and 11 boys who are eligible to enter first grade in September 1972. Eleven children reside in the district and walk to school either alone or with an older brother or sister. The remainder are driven by mothers from surrounding districts.

### The Program

Mrs. Brown has established an excellent relationship with the children, and their parents. Her program is soundly based on child development and she is working toward an individualized approach. The children arrive happily and are most enthusiastic about each day's events. The day begins at 9:15 and ends at 11:30 a.m. Daily activities include a self-directed period, teacher-directed activities, snack time, sharing time and a story time.

### Summary

The kindergarten setting while not ideal is adequate. In addition to the researcher, student teachers who were carrying out laboratory assignments for an early childhood course came and went regularly. The teacher and the children were capable of adjusting to such interruptions and there were few signs that these caused undue stress.

## CHAPTER 5

### BILLY

#### Billy At Home

Billy was born during November 1966 at the University Hospital in Edmonton. His father is an internal medicine specialist and his mother a registered nurse. She pursued her career for five years following her marriage, but has not worked outside her home since her first child was born.

Billy, a planned addition to the family, has one older brother and an older sister. The pregnancy was a normal one until the last month when his mother developed severe cramps which affected her legs. Because there was some uncertainty as to the exact date of the birth, labor was induced the day before Billy was born. There was no problem with the delivery. Billy's medical needs have been met by a pediatrician at the clinic where his father is in practice.

Billy's mother reports that he was a "very bright baby". He was breast fed and when he had had sufficient milk he fell off to sleep. He slept through the night at an early age. He lost a lot of weight in the hospital but when they got home his mother fed him on demand. Her body responded well to his needs for she says, "The more he took the more I had so the better we got along." He gained weight rapidly and was a content infant.

When Billy was introduced to solid food he liked almost everything. He would eat a whole can of fruit and preferred sweet foods to vegetables. However he didn't like peas and told his family so by spitting them out. At present his favorite dinner is hot roast beef and yorkshire pudding. He heartily dislikes potatoes. His mother serves him a small portion of potatoes every night and his daily response is, "Oooh not potatoes again! Do I have to eat them?" When the answer is that he must, he proceeds to do so very slowly and very sadly. He feels the same about creamed corn and squash.

Billy's mother substantiated her recall of his early life by bringing out a carefully kept photographic record of his early activities. He was a cuddly, affectionate infant and still seeks reassurance by climbing on his mother's or father's knee if something is troubling him. One of his first reactions that could be termed fear occurred when his mother put him into a "bathinette". He would "fly all over" and react as if he was both surprised and fearful at the size of the bath. For this reason Billy was bathed in a large mixing bowl during his early months, and in this way his mother could hold him very close.

Billy became mobile at an early age. He could sit alone at 3 months and by 4 months he was getting about the house on his tummy "swimming fashion". He crept soon after he was 6 months old, but didn't actually walk until he was 13 months. His mother states that he might have walked at an earlier age had he been wearing hard soled shoes, because

as soon as he got his first hard soled shoes "he took off". When he was mobile, Billy was given the freedom to explore and was only confined to a playpen when his safety demanded it. If a playpen was necessary he did not react to the situation.

Billy learned to feed and dress himself when he was quite young and once he had accomplished this there was no reversion to wanting assistance. He had some difficulty with his socks and at present is struggling with getting his shoes on the right feet.

When Billy had to have his fingernails and toenails cut during toddlerhood, he would try to run away. However, he accepted visits to the doctor and dentist without alarm, probably because he had accompanied his brother and sister. His mother relates one interesting experience when Billy was three and a half years old. He had had a prolonged bout of influenza and it was decided that he should have a complete blood test which necessitated taking three vials of blood from his arm.

...he laid up on the couch and the nurse put the needle in his arm and he just lay there and didn't cry; he didn't do anything; he just lay there. He looked at the ceiling and you could tell that he was counting the holes or something. When it was over the nurse said, "That's fine Billy, you're a good boy" and he sat up and said, "Now I'm a blood donor". He got up and we went to see the doctor and he never said a word. Now I thought that was quite significant for a three and a half year old.

Another new experience that he coped well with was a ride on an elephant which occurred when he was two and a half years old. His mother relates, "He was very excited.

I thought he would be frightened but he wasn't!"

His first visit to the children's zoo caused much excitement. He was very "enthusiastic about the ducks". He went up to a duck with his brother and as he reached to pet it, the duck turned its head and looked at him. "It almost scared the life out of him, because I think he thought it was plaster or something. They were just standing there you see, and he ran up and they moved. He was very frightened, but it didn't last."

While Billy seemed to get over frightening experiences with ease during toddlerhood, he revealed a new fear just before or just after he started kindergarten. His mother first noticed this when he began to wander at night. He would crawl into bed with his sister for a while and then with his brother, changing frequently throughout the night. He said that there were monsters in his clothes closet and under his bed. At the present time this fear of monsters has continued until he refuses to go down into the basement alone. He will not listen when his mother explains that monsters do not exist. If the dog will go with him he is happy. Another fear that Billy had to overcome was walking to kindergarten. When he began, his mother had to walk both ways with him. Then gradually on the return trip he would walk half way and his mother would meet him. One day she forgot about the time and Billy arrived at the door and called, "Ha, ha, I beat you!" His mother apologized and suggested that now he could walk home alone, but Billy's

reaction was, "No you still come to meet me." However, soon afterward Billy walked back and forth every day.

Billy reveals fear nonverbally when he watches frightening T.V. programs. He covers his eyes or lies down and rolls up in a ball.

Billy's photographs reveal that he recognized his father when he was between 6 weeks and 2 months. His first social experience outside the family was when he began to play with a neighbour's daughter who was a few months his senior. She was his only playmate until he started kindergarten. His mother has noticed a change in attitude toward adults during the past few months. When he was four, if the door bell rang, he would run to the door but hide behind it and peek out without saying a word. However kindergarten has helped him to overcome some of his shyness and he recently asked to have his teacher invited for a party. When she came he sat and drank juice and took part in the conversation for an hour and a half.

At present Billy likes other children, but in small groups. His mother has noticed that if another child wants something he is playing with he will give it to him and find something else for himself. After this happens once or twice with the same child he will simply settle the matter by saying, "You can go home." Although his mother says that he "lets other children walk all over him" her accounts of his recent reactions to his first playmate are interesting. This little girl has just begun to find out that Billy will no longer tolerate her initiating all the play, for his



mother overheard him say, "Look, if you want to play dolls you can go home because I don't want to play dolls." Recently he got even more annoyed and stated, "I am not playing dolls anymore". He has since refused to play with her. His mother asked him about it one day and he matter of factly told her that Karen was far too bossy and that he was not playing with her anymore. His mother sums up his present attitude in play situations, "He doesn't really let them push him around anymore and yet he won't fight."

His strongest attachments are to his family. He would be happy to have his brother and sister home all the time and although he does call on kindergarten friends, his biggest joy is to be with his family at the lake, tobogganing, skiing or snowshoeing. He is most secure when he is with someone he knows well but still has some insecurity about being with strangers.

If it is necessary to correct Billy he may get furious. He stamps his feet and slams the door in anger. Other times he looks very hurt because he may not have meant to do anything wrong. His mother feels that his reaction to correction is directly related to the situation and her own attitude toward the event that created the necessity for the correction.

According to his mother, Billy shows his emotions more nonverbally than verbally for she states that if he is nervous, upset or worried about something, or if he is being reprimanded he either holds his genitals or picks at his

fingernails. He will stand and say nothing. In a situation in which he feels secure and in the right he will become more verbal.

Billy evaluates his school work realistically. Sometimes he is proud of it and wants to show it and other times he is not happy and will say, "Look at this yicky thing!" His mother feels that when he says it's yicky, it is yicky.

Billy's home is an inviting two story building with ample play space. It has a warm atmosphere in which he seems to be growing happily.

#### Billy at Kindergarten

Mrs. Brown was interviewed after Billy had been observed for four hours in the kindergarten. She stated that she had been totally unaware of which children were the subjects of the study. She was not told how Billy's mother had responded to the interview.

Mrs. Brown said that Billy is happy in a quiet way and that although he enjoys group play he has not made any special friends in the class. She feels that Billy is not an initiator and that he can be indecisive when there is a period of self-selection and self-direction. When he first came to kindergarten and was asked what he would like to do he would invariably reply, "I don't know". At present he does not verbalize this indecision but reveals it by wandering around until he sees someone doing something that interests him. He then joins him.

Mrs. Brown feels that Billy's dependency upon his family has decreased for she has noticed that while other children wait around for older brothers and sisters to walk home with them Billy doesn't even suggest such a thing.

New situations are accepted well and Mrs. Brown is not aware of any specific fears in Billy.

The only situations that seem to cause him some frustration are activities which involve small muscular co-ordination, for example small manipulative games or use of scissors.

Mrs. Brown indicates that to her, Billy is a placid child whose whole personality seems to say, "everything's fine". She is concerned that when it is necessary to correct him he may be unwittingly hurt because he will not "talk back" and does not show how he feels.

In conclusion she says, "I've seen him get annoyed but not really so angry that he might lash out at another child. If he is excited he comes and tells me about it. I can't think of any specific nonverbal behaviour that may reveal emotions, other than his quietness."

#### What Billy Does at Kindergarten:

##### His Nonverbal Behaviour

Because all of the children observed emitted so many nonverbal cues it is impossible to relate every action that was recorded. Therefore only those which appear to be directly related to his emotions are related in detail.

Others are included as continuity demands.

Billy is brown eyed and small in stature compared to some of his peers.

Observation #1, February 21, 1972, 10:12 - 11:30 a.m.

Communication Event #1

The teacher was completing a directed activity in which the children were preparing to mail letters to their parents. Each child had a stamp and an envelope and the teacher led a discussion as to how to address, stamp and mail letters.

Billy was sitting at Table One with seven other children. His position was near the centre of the table facing the teacher. He was on the left side of the observer who sat in the corner at the end of the table. As the observation began Billy placed his left elbow on the table and spoke to the boy on his left about how much money he had in the bank. The boy questioned Billy's statement. Billy said adamantly, "I got one hundred and forty dollars in the bank. My Dad told me." The boy responded, "Huh, I got thousands!" Billy put his head far to the left, blinked and pulled his mouth tight.

Communication Event #2

When the teacher suggested that the children put their pictures into the envelopes, Billy looked at her. He picked up the envelope with both hands, put one hand into the envelope and looked at the teacher again as he waited

for the instructions.

When the teacher placed a stamp on the table in front of him, he fingered it. He clenched both fists and pressed them hard against his cheeks, as he noticed that his stamp had the number seven on it and the stamp of the girl next to him had an eight. Unable to contain himself he pointed at his stamp and said, "Seven!" He then nudged the little girl and pointed at her stamp saying, "Look seven! Look eight!" The teacher placed a one cent stamp beside his stamp and began an oral lesson about representation of eight cents through various number combinations.

During this directed period Billy put his envelope on the table, yawned, coughed, put his finger first in his nose then into his left ear. He rubbed a finger under his nose and then ran it along the edge of the table. The teacher continued to talk. He glanced at her, opened his mouth as if to speak, closed it, put his hands on his lap, looked at the observer and began to wiggle both feet. He then sat still and bent his feet so that his heels were up and his toes on the floor. There was no verbalization from Billy during this part of the event.

### Communication Event #3

Mrs. Brown seemed to feel that all of the children understood the way in which stamps can be combined to a value of eight cents. She began to direct the children step by step as to how to stamp an envelope. She said, "Put your finger on the top right hand corner of the envelope."

Billy put his finger on the top left hand corner of his envelope and while he waited for the teacher to check, he rested his head on his right hand and looked at the envelopes of the other children at his table all of whom had their fingers on the right hand corner. The teacher asked him to hold up his right hand. Billy did. She then said, "Now put that finger at the top of the envelope on the same side as your right hand." Billy again put his finger at the top left hand corner and said, "But I write with my left hand." The teacher then took his right hand and manually helped him to find the right place for the stamps.

Because there was still some confusion regarding some children having one stamp and others two, Mrs. Brown went to the blackboard and drew eight pennies to demonstrate combinations that could represent eight. While she explained Billy again emitted an amazing number of nonverbal cues. He rubbed his hair, put his finger in his ear, glanced at the teacher, pulled his right ear and looked at his letter on the table in front of him. He fingered the first stamp, licked it and pressed it on. Looking at the teacher, he pulled his toes up on his chair, and glanced at the other children some of whom were licking their second stamp. He then licked his second stamp and put it on the letter beside the first one. Having done this he looked at the teacher, pulled his knees up under his chin and glanced at the observer. While the teacher continued the blackboard demonstration he got up and went to Table Two where he glanced

at the children, blinked, opened and closed his mouth twice, blinked three times, looked at the observer, returned to Table One and sank in his chair with his mouth protruding.

#### Communication Event #5

When the letters were finally stamped the teacher directed the children to tidy the room for snack time. Billy responded immediately by going to Table Two and putting a pencil in the proper container. He walked to Table Three, looked across it and went back to Table One to see what else needed to be put away. Stretching across the table and totally ignoring the other children he picked up a bottle of glue, put it on the back shelf, came back and scraped some scraps of paper into his hand and took them to the waste paper basket.

#### Communication Event #6

The room was tidy and it was time to prepare for the snack. Billy took a cup from one end of his table and went back to his chair. He knelt on it. He put the cup on the table, leaned on the table bracing himself with both hands, then cupped his chin in his left hand. Clenching his hands he put first one leg, then the other down to the floor. The teacher began to serve the juice. Billy flipped his empty cup up and down, picked it up, put it to his lips and looked at the teacher who was serving the children at Table Three. He put his finger into his nose folded his arms on the table and glanced out of the window where the elementary children

were coming out for recess. When the teacher asked him if he would like to serve the cookies he responded with a shake of the head. He put his head down on his arms which were folded on the table. After the teacher had filled his cup he ran his finger around the top edge of his cup waiting quietly for snack time.

#### Communication Event #7

Billy was still sitting at Table One. It was clean-up time. Billy looked from his table to the group at Table Three. He put his empty cup to his mouth, then back on the table. The teacher asked if anyone would like more juice and his hand shot up. He drank the juice in one quick drink, tapped the empty cup with his fingers and got up and went behind the flannel board where he poked his head around, smiled and came back to his table.

When the teacher announced that it was story time Billy ran to the centre area. Enroute he wrestled with two boys, smiled as they let go, then turned and tried to wrestle with Judy who is a much larger child than he. Letting go of Judy he stood and flailed his arms, grabbed a viewmaster from Dan who was peering through it, took a quick peek and gave it back. He ran to the puppet house, picked up a hat from the floor and tossed it on to the top of the puppet house. With a smile he pushed into the centre of the group seated in a semi-circle in the open area and waited for the story to begin.



Communication Event #8

The teacher took her place on a small chair in front of the group and began to read. She held the book so that the children could see the pictures. Billy tickled the boy beside him and raised his hand when the teacher asked how many had heard of Curious George. As other children responded verbally, Billy knelt up high put his right hand to his lips, then moved his left hand to his left knee and momentarily looked at the teacher. He looked intently at his hands, fingered his fingernails and entwined his fingers. He glanced out the window. His eyes returned to the book and as the story proceeded his mouth opened and his hands twisted together. He then pulled his second finger over his pointer finger and put his right hand in his pocket. Suddenly he moved first his left hand, then both hands to his genitals. Seconds later both hands moved to his knees, but he squirmed and his left hand returned to his genitals as he slid to the left so that he could see the book better.

When the teacher asked what a blotter was, then explained it to the class, Billy looked at the book, then at the teacher, opened his mouth, closed it and looked at the book again. While the teacher was still talking he turned to watch a girl behind him who was playing with a puppet. He smiled, leaned his head to the left and leaned his body forward. The teacher began to read again.

Billy kept his eyes on the book as the story became exciting. He knelt up higher in order to see over some of

the taller children, fell backwards, got back up on his knees, put his right hand in his pocket, took it out and twined his shoe lace around it. He put one hand on his ear and rubbed an eye with the other. Momentarily taking his eyes from the book he picked up his lace, blinked, dropped the lace and looked at the book. The story tension mounted. He sat motionless, mouth slightly parted then growing wider as his eyes grew larger and the story reached a climax.

As the excitement of the tale subsided Billy blinked, wobbled his head, put his hand over his mouth and coughed. He blinked again, glanced at a child beside him, closed his eyes, opened them, smiled at the observer and finally looked at the book again.

The story continued. Billy fingered his fingernails, blinked and wobbled his head. He folded his arms, glanced at a child beside him and wiggled backwards to the outer edge of the semi-circle. The child beside him leaned over and put his elbow on Billy's shoulder. Billy leaned on him and looked at his own trousers. He pulled at the material of his pantleg, squeezed it, and folded both hands over his genitals. Eyes wide he went through a series of mouth movements and fingered his fingers. He then held his genitals, glanced at the teacher, and as the story began to rise to another climax, he popped his tongue out of the corner of his mouth. Pulling his bottom lip over his top lip he puckered his lips.

His eyes returned to the book. He put one hand on

the other child's knee and fingered his corduroy trousers. He pulled his hands back, looked at them and hung his head. Twisting his fingers, he lifted his head, glanced at the group, pulled on his sleeve, rose higher on his knees and put both hands on the shoulders of the boy in front of him. As the story led to a "count down" for Curious George, Billy went through a series of mouth and tongue movements. Finally his mouth moved from side to side and then stopped.

As the story related that Curious George received a medal, the teacher and the children read the words on the medal. Billy kept his eyes on the picture and, blinked, but did not read along. As the story ended Billy put his hands on the top of his head and sighed.

#### Communication Event #9

After the story, the teacher led the group through a game in which there was little nonverbal communication from Billy. The game lasted 3 minutes and Billy smiled throughout, a sequence which was child-group oriented.

#### Summary of Observation #1

This observation which was 56 minutes in length yielded 283 observed and recorded nonverbal cues; approximately five cues per minute. There were nine communication events. Because there is great variation in the duration of these events no comparison of the quantity of data obtained in the various events can be made.

Table 1 indicates the situation and the quantitative

and qualitative analysis of Billy's nonverbal behaviour in each event in Observation #1.

Table 1 quantifies and qualifies Billy's nonverbal responses during a teacher dominated situations. An examination of the data reveals that Billy verbalized only twice during the observation but emitted 283 nonverbal cues, 202 of which were related to involvement with his "self". Teacher directed activities appear to limit Billy's interaction with the group and individual children. While the quantity of his nonverbal interactions with his teacher surpassed those involving children it is important to note that most of these were merely eye movements in which Billy focussed on the teacher as she spoke or read. The story time was the longest event and the number of nonverbal cues per minute increased to approximately ten. However in this situation the emissions, although unconscious, were highly attentive. This appears to indicate that when Billy is involved with a story he emits non-symbolic, attentive cues. An example of this is his focussing on the teacher, fingering his fingers and blinking as the story rose toward a climax.

The limited number of interpersonal nonverbal cues is possibly due to the lack of opportunity for interpersonal relationships during the teacher directed period.

With only 14 of Billy's nonverbal cues classified as responses it appears that in a teacher directed period either Billy does not respond or with twenty children in the class it is difficult to involve individuals in responding to questions.

TABLE 1  
ANALYSIS OF OBSERVATION #1: BILLY

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
1. Preparation for stamping letters.	0	2	0	2	0	0	0	4	4	0	0	4	2	2	0	0
2. Oral lesson re: value of stamps.	2	2	0	13	1	4	7	29	17	12	12	17	16	13	0	2
3. Stamping letters.	9	0	2	18	2	14	17	62	48	14	28	34	34	28	8	0
4. Folding in putting in envelopes.	0	0	0	6	0	0	8	14	8	6	2	12	11	3	0	0
5. Clean-up preparation for snack.	1	0	0	1	0	0	2	4	4	0	2	2	3	1	1	0
6. Snack time.	1	0	0	7	0	9	1	18	14	4	10	8	13	5	1	0
7. Clean-up preparation for story.	1	2	3	3	0	7	1	17	17	0	8	9	10	7	2	0
8. Story time.	6	8	4	85	1	6	12	122	46	76	103	19	103	19	1	0

TABLE 1 (Con't.)

Event Situation	Quantitative Analysis						Qualitative Analysis									
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
9. Group game.	2	0	8	3	0	0	0	13	11	2	8	5	10	3	1	0
TOTALS	28	13	17	138	4	40	48	283	169	114	173	110	202	81	14	2

Key

C-T	-	Child-teacher interaction	S	-	Symbolic Cue
C-C	-	Child-child interaction	N.S	-	Non-symbolic Cue
C-G	-	Child-group interaction	Att.	-	Attentive Cue
C-S	-	Child-self interaction	I.Att	-	Inattentive Cue
C-O	-	Child observer interaction	Intr.	-	Intrapersonal Cue
C-S-E	-	Child-self-environment interaction	Inter	-	Interpersonal Cue
Com	-	Combinations of above categories	R	-	Responsive Cue
T	-	Totals	QE	-	Qualifying expression

Observation #2, February 22, 1972: 9:09 - 10:15 a.m.

This observation took place during the first period of the day. In this kindergarten this is a self-selected, self-directed time. The teacher interacts with individuals as they work at their chosen tasks. She sometimes introduces new media or new interest centres.

Communication Event #1

Billy came into the classroom, stood, surveyed the scene and smiled. He went into the cloak room where he was greeted by the teacher. Two minutes later he reappeared with his running shoes in his hand. He smiled at Dan and said, "Hi Dan," then sat beside Dan at Table Three. There he began to put on his runners. As the teacher passed by he glanced at her, then got up and with one toe in each shoe and both heels out he wobbled about smiling at his own funny walk.

A little girl came in and announced that there would be no school Thursday and Friday because there was "teacher's convention". Billy smiled and said, "No more school." He then skipped to Table One, sat down and put one of his runners on. He stood up, put one hand on a chair and bent to pull the other runner on. With his toes half in he walked to the cloakroom area and disappeared.

Communication Event #2

A minute later Billy reappeared with his shoes on. He joined another boy who was putting on a painting smock. He tapped the boy on the shoulder but got no response. He

He bent and peered up into the child's face thus eliciting a smile. The teacher came by, asked why he had not tied his shoes and supplied the answer with, "Forget how?" She knelt to tie them and as she did so Billy picked up a magnifying glass from the table and peered through it at the top of the teacher's head. As the teacher moved on to talk to another boy Billy, with his lips protruding, stood and listened. He put his hand into his mouth, pulled it out, smiled and went to the cloakroom reappearing immediately with a paint smock in his hand.

Billy, still smiling, walked toward Table One. He tugged on his smock trying to get into it as he moved. He spoke to Randy who was painting, then he looked at Randy's picture as he finished getting into his smock. He then climbed onto a chair beside Randy, got down and walked toward Table Two. As he walked he reached back over his shoulders attempting to button his smock. When he was unsuccessful he came back to Table One, put his finger in his nose and climbed up and knelt on a chair in front of an easel.

### Communication Event #3

Billy pulled his dragging smock around him, peered into a tin of dry paint, got down, went around the table where he picked up a brush from a jar of red paint and painted a wide red streak on a sheet of paper which was fastened to one of six preerected table easels. He smiled, ran around the table to another easel and picked up a brush



and poked it at a little boy. The other boy poked back with his brush. Billy then filled his brush with red paint and with a flourish and a grin painted a red streak on the other boy's smock! He smiled and reached to adjust the clothes pin that held the paper on the easel in front of him. As a boy sat on the other side of him he looked at the child and smiled broadly. The other boy said, "What'r ya making?" but Billy made no reply. Instead he dipped his brush and painted a black streak saying, "I made some black".

As Billy continued to paint he muttered to himself, "Everyone wants to paint." He glanced at a girl opposite him but his focus returned to his painting. However this was only a momentary interest for he leaned forward, looked at the black paint, dipped his brush and reached through between the easels to poke black paint at a boy opposite him. The other boy saw some paint drip on the floor and said, "Got paint on the floor, you're in trouble!" The teacher came to button Billy's smock. When she spoke to the other boy about the paint on the floor, Billy smiled and went on painting. Moving his brush from left to right he synchronized his head movements with the painting movements leaning first far left and then to the right. He talked to himself and smiled.

Leaning toward the boy on his right he asked him what he was making and without waiting for a response he said, "I'll make that too." With a smile he went back to his painting. A few seconds later Billy glanced at Randy

and turned his brush upside down to use the wooden end as a brush. He wobbled the brush as it scratched the paper. He looked at Randy. When Randy paid no attention Billy turned the brush right side up and went back to his painting.

After a few strokes, he glanced at a girl opposite, bit the end of his brush, looked at his painting, then dipped into the black paint and reached across the table trying to dab black paint on the other boy's nose. Laughing he ran round the table and back again. As he started to paint a child asked, "What can I use for smoke?" Billy glanced at her and said, "Purple silly!" He dabbed some black paint on his fingernails and went back to work.

Billy finally reached up to undo the pins that held his picture. He carried it very carefully to where the teacher was hanging paintings on a line. Standing behind her he said, "I'm finished mine." The teacher did not hear him so he repeated "I'm finished mine!" The teacher turned, smiled, took his picture and hung it up.

#### Communication Event #4

Billy returned to Table One, put a new sheet of paper on the easel, sat down, opened his mouth, closed it, then dipped a brush into the paint. He crossed his feet under his chair and with his eyes intent upon his work he scribble painted in a rather reckless fashion. Suddenly he got up, went around the table to the boy on the opposite side, pointed at the boy's picture, talked about it and then went back to his own work.

He pulled one foot up onto the chair then put it down and reached far over the table to get some black paint. With his head to one side and his eyes on his work he painted slowly. Gradually he speeded up, then slowed again and stopped as he turned to look at a boy in the centre area who was wearing a "space mask". Going back to his work he began rubbing with the brush.

Billy looked at the teacher who was talking with two other children nearby. He glanced at the observer and went back to his painting. As he painted he pointed his toes to the floor, first one foot and then the other. He reached up, removed the picture from the easel and walked toward the teacher who was working with a small group at a table. Billy stood behind the teacher while he was holding his picture.

#### Communication Event #5

The teacher did not notice Billy so he turned to the aide and said, "I want to tell a story." He followed Marie, the aide, to a table and said, "I don't have a story." Marie led him to the back shelf where he put one elbow on the shelf and fingered his fingers, eyes looking into space. Very slowly he began to tell a story about his painting, but as he spoke he continued to finger his fingers. As Marie printed his story Billy moved closer to her, then backed away. He scratched his hip, tugged at the back of his smock, and as he finished he turned his back to Marie. She unbuttoned his smock. Smock in hand, Billy skipped to the storage room and disappeared.

Communication Event #6

One minute later Billy reappeared and went to Table Three. He fingered a box, glanced at another child, pulled his shoulders up, then put his hands on the table and asked, "You making puzzles?" The child moved away. Billy lifted the completed puzzle and let it down carefully as he glanced at the other children at the table. He picked up a box of dominoes and fingered the dominoes. When he jiggled the box some of the dominoes fell out but he very carefully replaced them.

With elbows on the table he turned to watch two girls who were playing with a deck of cards. Billy reached over and took two cards. He scratched his head, scratched one eye, moved to the end of the table and climbed on to a chair where he knelt on both knees. It was then necessary for the observer to move to retain her view of Billy.

Communication Event #7

A minute later Billy was lying on the floor on his stomach, arms folded, watching two boys who were drawing pictures. He looked at one boy's picture, then at the other boy's picture, pulled his legs up and down three times and stopped with his legs bent at the knees and his feet in the air, his head resting on his hands. He noticed the teacher working with a group at Table Two and got up and joined the group.

Communication Event #8

The teacher was introducing red and yellow plastic squares, diamonds and rhombuses. Billy picked up a handful of the shapes, and leaning toward the teacher asked, "Are these glass?" The teacher did not hear him. He put his elbows on the table, looked at a boy beside him, wiggled his body, crossed his ankles and leaned so far forward that his head was between the teacher and the other child. He hung his head, lifted it, then leaned it over until it touched the other boy's head. Billy began to manipulate some of the pieces. He watched Chris make a design. Putting his chin in his hands, he moved one foot onto the other, spread the fingers of his right hand and clenched his fists under his chin. The teacher tapped him on the shoulder and said, "Make a yellow square." The teacher then left the group. Billy put one foot ahead of the other and placed two yellow triangles together to make a square. He said, "See, I did it." No one responded. He put his elbow on the table, put one knee on a chair where another boy was sitting, folded his arms, leaned forward, and got down and walked away. Suddenly he stopped, put his finger in his nose, turned and came back to Table Two where he stood legs wide astride and worked with the plastic shapes. He was alone at the table.

Communication Event #9

A minute later Billy was manipulating two yellow diamonds and a yellow square. He worked for a moment, glanced at the boy opposite him, and using two hands attempted to

fit the pieces together. When he was unsuccessful, he pushed them away. As two children on the other side of the table began to hit each other, Billy looked at them and leaned forward fingering his fingers. There was a smirk on his face. The hitting stopped and one of the pair turned, put a finger on Billy's nose and said, "Everybody hates Billy." Billy frowned and said, "My sister could beat you up." The boy then put his hand on Billy's ear as if he were about to pull it. Billy clenched a fist, put it under his chin, looked at him and said, "My sister's seven!" His eyes then moved quickly from his attacker to the boy next to him, then to the boy opposite and finally to the observer. Finally he wobbled his head, looked at the boy who had obviously hurt his feelings, fingered the plastic shapes, scratched his nose, folded his arms and moved to the other end of the table. There he jumped up and down and began to look at the felt shapes on the flannel board.

#### Communication Event #10

Billy went to Table Three and it was necessary for the observer to change positions. Billy was watching two other boys who were conversing with the teacher about the globe. He stood a moment, then with his eyes lowered, wandered away.

#### Communication Event #11

A moment later Billy joined the two boys who were still on the floor drawing pictures. Billy lay on his

stomach and slid toward them. He watched them for a few seconds, then got up and stood fingering his fingers while he turned and looked at the teacher and the group at Table Three who were still discussing the globe. He hesitated, took a step, stood, then moved to join them.

#### Communication Event #12

This time when Billy came to Table Three, the teacher knelt beside him and she directed her explanations about the movements of the sun and earth to him. She was explaining the source of day and night in explicit terms. As she paused Billy looked at her, smiled and, pointing at the respective points on the globe, said, "When it's winter here, it's summer down here!" The teacher smiled her approval, but picked up a cloud made from construction paper and put it between Billy and the sun to indicate cloud effect on shadows. He left the group.

#### Communication Event #13

Billy went from the globe lesson to Table Two where he leaned on the table to watch a boy working on a puzzle. He glanced back at the teacher and the group he had just left, looked back at the puzzle, moved to the end of Table Two where he stood and looked again at the group working with the globe. Billy slowly moved toward the teacher, then backed away until he was behind the flannel board and out of view of the observer.

Communication Event #14

Billy next appeared at the back of the room with three other boys. They went to the shelf where they stood looking at the puppets. They chose one each. Billy chose a duck. The other boys left and went to the puppet house. Billy put his puppet back on the shelf and started to follow them. However enroute he tapped Dan on the shoulder and said, "Has Chris got your puppet?" With that he followed Dan to the puppet house. The other boys were inside with the door closed. Billy stood outside and fingered his fingers.

Communication Event #15

Dan, who is taller than Billy, turned and picked Billy up and carried him to the centre area. He dropped him and Billy in turn picked Dan up and dropped him. Dan then grabbed Billy, and put him over his shoulder. He carried him a few steps then dropped him on the floor in front of Chris. Chris, who is smaller than Dan, picked Billy up and they both fell. Billy glanced at the observer and smiled. Dan then heaved Billy onto his shoulder and carried him to the teacher who put her arm on Billy's head and asked Dan to put him down.

Communication Event #16

Billy's eyes returned to the puppet house. He ran to the door, turned and ran back to the puppet shelf. He skipped back to the house. The teacher followed him and put her hands on his shoulders apparently in an attempt to slow him down. However, Billy ran to Table Three where he once



more tried to interact with Dan. He talked to him and then followed him to the shelf area. Dan walked off and left him. Billy stood with his eyes wandering around the room. He looked at the observer, went to Table Two near her, sat on a chair, turned and smiled at the observer. His eyes returned to Dan who was playing in the open area with another boy. He walked nearer to them and Dan said, "I'll give you a piggy back ride. Stand up here." Billy smiled as he rode piggy back on Dan. They fell in a heap. Billy got up, fingered his fingers, rubbed his eyes and walked back to sit on a chair at Table Two.

#### Summary of Observation #2

This observation was 58 minutes in duration and Billy emitted 324 nonverbal cues; an average of approximately 5.6 cues per minute. The cues were divided into 16 communication events.

An examination of Table 2 reveals that in this observation which was totally child directed there was a rise in Billy's nonverbal interaction with individual children and groups of children. This seems to indicate that Billy tries to communicate with others when he has the opportunity. This could also account for the noticeable drop in child-self interaction when compared with Observation #1. It appears that when Billy is permitted or feels free to interact with other children there is less need for him to emit nonverbal cues that are related to his "self".

TABLE 2

## ANALYSIS OF OBSERVATION #2

Event Situation	Quantitative Analysis											Qualitative Analysis				
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
1. Arrival Putting on runners.	1	0	0	10	0	0	1	12	12	0	9	3	10	2	3	2
2. Tying shoes preparing to paint.	0	4	0	7	0	11	1	23	17	6	11	12	18	5	5	0
3. Painting child's choice.	2	9	0	15	0	38	6	70	54	16	45	25	16	54	7	8
4. Painting con't.	1	2	1	9	1	16	2	32	25	7	27	5	25	7	1	1
5. Dictating story to aide	8	0	0	3	0	6	0	17	8	9	9	8	4	13	2	1
6. Searching for new activity.	0	1	2	4	0	13	0	20	14	6	4	16	17	3	0	1
7. Watching Boys drawing.	1	2	1	5	0	0	0	9	5	4	3	6	5	4	0	0

TABLE 2 (Con't.)

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
8. Working with plastic shapes	1	4	0	17	0	12	1	35	24	11	14	21	30	5	1	1
9. Plastic shapes (con't)	0	11	1	6	0	8	0	26	22	4	2	24	14	12	3	1
10. Observing teacher and group with globe	0	0	0	0	1	1	1	2	2	0	1	1	1	1	0	0
11. Watching boys drawing.	0	0	2	4	0	0	2	8	7	1	1	7	5	3	0	0
12. Interacting with teacher re globe.	4	0	0	0	0	0	1	5	5	0	3	2	0	5	0	1
13. Indecisive movements.	0	1	0	2	0	6	3	12	12	0	11	1	8	4	0	0
14. Beginning puppet play	0	3	2	2	0	3	2	12	11	1	0	12	1	11	0	0
15. Physical play with boys.	1	9	0	4	2	0	3	19	19	0	0	10	4	15	4	0

TABLE 2 (Con't.)

Event Situation	Quantitative Analysis						Qualitative Analysis									
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
16. Varied Free Activities.	2	4	0	7	2	6	1	22	21	1	0	22	14	8	2	0
TOTALS	21	50	9	95	5	120	24	324	258	56	140	184	172	152	28	16

Key		
C-T	-	Child-teacher interaction
C-C	-	Child-child interaction
C-G	-	Child-group interaction
C-S	-	Child-self interaction
C-O	-	Child-observer interaction
C-S-E	-	Child-self-environment interaction
Com	-	Combinations of above categories
T	-	Totals
S	-	Symbolic Cue
N.S	-	Non-symbolic Cue
Att.	-	Attentive Cue
I.Att	-	Inattentive Cue
Intr.	-	Intrapersonal Cue
Inter	-	Interpersonal Cue
R	-	Responsive Cue
QE	-	Qualifying expression

Qualitatively Table 2 reveals that Billy's nonverbal interaction is more symbolic when his activities are self directed, but he then appears to become less attentive to the task. The only task that Billy became involved in was the painting and even then his nonverbal inattentiveness was revealed. There is a distinct rise in interpersonal nonverbal communication revealed in this observation when compared with Observation #1. Billy seems to relate more to other children as his independence of action increases. However, his interpersonal communication with adults remains approximately the same. The term "teacher" includes his interaction with the aide. There seems to be more use of nonverbal cues to qualify expression during a self directed period and more nonverbal cues that are responses. This can probably be directly related to the fact that there is more interpersonal nonverbal interaction, as well as more verbalization, as freedom increases.

Observation #3, February 23, 1972, 9:30 - 10:30 a.m.

This observation took place during the self-directed period. However during this session the teacher introduced measurement of volume in pints and quarts, so that the communication events are set in both teacher and child directed activities. Billy's orientation of direction is noted as the observation proceeds.

Communication Event #1

Billy was using a small plastic shovel to dig in the sand tub when the teacher called, "All eyes this way." He responded by glancing at the teacher. He then looked back at the sand and back to the teacher who was encouraging a girl to show an object of interest that she had brought from home. Taking both hands to his shovel Billy began to dig. He turned his head to look at Chris who was talking nearby. He let his eyes move to the teacher who was speaking to the total group. He looked at the children at Table One. They were talking as the teacher spoke. Finally, he went back to digging. His mouth opened and closed as he dug. He looked over to a table close by and reached for a smaller shovel. Moments later Frank began to dig beside him. Billy flipped some sand in his direction and they both laughed. Billy sieved some sand, looked at two children wrestling on the floor and then dug harder than before. Dropping the shovel, he began to heap the sand with his hands. He then picked up a truck and began to load the sand. Frank pointed at a green truck on the little table beside Billy and Billy handed it to him.

Communication Event #2

When Raymond came to the sand table and said, "Anybody wanna play," Billy dropped his shovel and said "Sure, I do." He followed Raymond to Table One where the tape recorder was set up. Billy watched as Raymond announced, "Now here comes Billy." He handed the microphone to Billy. Billy smiled, but handed it back. He looked toward the door as Mary and Tracy came in and then looked at the tape recorder and said, "Now it's going!"

The teacher held up a pair of runners and asked to whom they belonged. Billy shrugged, "Not mine," picked his nose, put his finger into his mouth, cleared his throat and straightened his shoulders as Raymond announced that Billy would speak. He wobbled his head and smiled when he heard his name on the tape. He took the microphone but put his finger into his mouth and did not speak. Raymond reached over and took the microphone from him. Billy got down and started back to the sand tub, but returned to Table One, climbed up, and legs hanging over the edge rubbed his right arm and turned to Dan who had joined the group.

Communication Event #3

Dan began to work with some mini bricks. Billy looked at the bricks, scratched his nose, and went to the sand where he asked, "Can I play?" The child at the sand tub shook his head. Billy returned to Table One. The boy at the sand called, "Okay, you can play." Billy fingered a few mini bricks, then picked up two and rubbed them together. He put

them on the table and pressed them, then picked them up and held them against his cheek. As the boy who had been at the sand came to Table One, Billy got down and left.

#### Communication Event #4

After wandering about the room for two minutes Billy came back to Table One. He made a tiny house out of mini bricks. House in hand he chased a boy toward Table Two. Billy disappeared behind the felt board, while the other boy began to put letters on the visible side. Billy came around to look. The boy ran around to the other side and laughing aloud Billy took up pursuit. As he passed the table he noticed the salt trays and stopped. He rubbed the salt out until it was evenly distributed in the tray, piled it up, and rubbed it out again, spilling some as he did. Billy held the tray as the aide scraped the salt into the tray. He spoke to Marie but his words were inaudible. Marie left and Billy wiggled the tray sideways, then put one finger into the salt. Taking two handfuls of salt he let it stream through his fingers, watching it intently. He repeated this action seven times, then glanced at Betty and wobbled the tray horizontally as his body swayed. Putting the tray back on the table he pulled all of the salt into a pile. In response to singing at Table One he looked at the group concerned, then back at the salt which he was sprinkling about in the tray. Betty had become his audience, and so he placed his feet astride, looked at her and filled his left hand with salt which he let flow through the fingers of his right hand.



Frank moved in and put his hands into the tray. Billy made two distinct hand prints in the salt, then wobbled the tray and watched the movement of the salt as the prints disappeared. The teacher called, "Look what David brought."

#### Communication Event #5

Billy responded by running and joining a group of nine children who, with the teacher, were looking at a toy fire station. Billy got down on his stomach to peer into the station. He then got up on his hands and knees and crawled around to where the teacher was. He looked at the fire truck, fingered his fingernails and said, "We have spools in kindergarten." He looked at Mrs. Brown but got no response.

Down on his stomach with his mouth open he again peered into the station. The teacher took the fire chief's car from a bag. Billy jumped up, closed his mouth and looked at the car. He suddenly skipped to Table One, then to Table Two, wiggled the salt tray, smiled, looked at Lynne, smiled at Randy and Frank, wiggled the tray wildly and smiled again. The teacher called the children to Table One.

#### Communication Event #6

Billy went to Table One where the teacher had a jar with a candle in it. He knelt on a chair beside the table. As Mrs. Brown began to talk about oxygen and burning, Billy fingered his fingernails and looked at his hands. He rubbed his nose, looked at the teacher and leaned his head forward. Tossing his head he again looked at Mrs. Brown, fingered his

fingernails, and clasped the fingers of his hands together. Putting his left foot over his right foot he drew back from the group. A lady came to the door and Mrs. Brown left the group saying, "Chris, you be in charge!"

#### Communication Event #7

While Mrs. Brown was absent Billy's eyes moved from child to child as they talked about the "eeny meeny magic" of the candle going out when a jar was put over it. Chris put his hands on Billy's chest. Billy looked at them and took hold of Chris' fingers. He turned and looked at Judy.

When Mrs. Brown returned she explained to the children that although we can't see air we can feel it. She waved her hands to show the children how to feel the air through motion. While most of the children flapped their hands vigorously, Billy moved one hand haphazardly.

Billy looked first at the teacher, then at the candle as Mrs. Brown put the jar over the candle and extinguished the flame. Leaning farther over the table he watched again. Judy pushed Billy. He screwed up his mouth and drew back as she got in front of him. Billy said, "My Dad did that one time too." No one responded. Billy climbed on the table behind Judy who pushed him backwards. He got down and when he couldn't get into the group he moved to the other end of the table and climbed up where Dan was still building with mini bricks. However, he jumped down again and ran around the table where he squeezed in beside the teacher. He leaned forward in front of David.

Billy watched and bit his lip when the candle went out. He smiled as the teacher explained that the oxygen was all gone. Then as the experiment was about to be repeated he got down at eye level with the candle just as the teacher said, "See." Billy noticed the carbon on the jar. He grinned and said, "Ya!" Screwing up his mouth he pulled himself up to look into the jar. Getting down to eye level Billy again watched the candle go out. The teacher put the jar over the candle and quickly removed it. The candle flickered and flared. Billy said, "Let's do it again, a few more times and the jar might be burnt!" The teacher made no response. He folded his arms and scowled. He began to speak again, "and you can," but stopped. Billy got down, left Table One and went to Table Two, then to the storage shelves, but came back to the candle experiment. He knelt on a chair, and put his tongue out until it touched his nose. When Mrs. Brown asked who had been working with Dan and the mini bricks, Billy said, "Not me". He got down, glanced at the teacher and went to Table Two. He climbed on a chair, knelt, then slid to a sitting position.

#### Communication Event #8

The candle experiment was over. Mrs. Brown brought a pail of water to Table One. Billy put out his tongue and watched the teacher talking first to Dan then to the total group. Billy wiggled on his chair, looked at the salt trays on Table Two and climbed up on the table. Mrs. Brown said, "Don't sit on the table." Billy got down, and slowly moved

to Table One where he knelt on a chair and looked at the teacher who held up a chocolate milk carton and asked, "What comes in this?" Billy replied, "Chocolate milk." He smiled.

Billy looked at Mrs. Brown as she picked up a quart carton. He leaned his head to the left, picked at his nose, rubbed his nose and folded his arms. As the teacher continued the lesson on measurement, Billy put his hands on Chris' shoulder and said, "I can't see, Mrs. Brown." When he got no response he leaned forward and bent down to look between some children. As the lesson went on, Billy tossed his head, put his lower lip under his upper lip, and seized the edge of the table with both hands pulling himself to a standing position. He raised his hand when the teacher asked a question and looked at Dan when Dan refused to take a turn to pour water. Billy then pulled on the zipper of Chris' sweater and began to pick at his own fingernails. He felt Chris' hair, then his own hair, and looked from Dan to Chris. After taking a peek through the viewmaster that Dan had handed to him, he gave it back and moved closer to the teacher. The teacher raised her voice slightly and said, "Doug, go away and read a book" because she thought Doug was pushing. Billy watched Doug go, then tried to grab a carton from Chris. Judy grabbed at it too and water was spilled on the table.

Billy slapped the water briskly and smiled. He wiped his hands on his trousers and his sweater, looked at the teacher, and then at the observer. He got down, went around the table and climbed up. He leaned toward the puddle,

picked his nose, moved closer, looked at the teacher and children and when the teacher looked away flattened his thumb in the water. He smiled. Then he flattened both hands in the water, lifted them quickly and watched the print disappear. Billy's water play continued as the lesson went on. He swirled the water first with one finger and then with several, glanced at the teacher. He then watched the water intently. When the teacher and Marie began to wipe up the water he looked up at them and smirked. He dried his hands on his shirt.

#### Communication Event #9

Billy rubbed his hands in the salt as he went past Table Two. He disappeared. The teacher announced clean up and Billy reappeared to sit at Table Two. While he was waiting Billy reached across the table and put a paper wad in Chris' ear. Billy's tongue popped out and he picked at his fingernails. He turned and spoke to Dan and when Dan answered, Billy nodded. Billy leaned in front of Doug and fingered a paper cup, then fingered his cookie and put it up to his eyes.

#### Communication Event #10

During the snack time Billy sat on his feet, knelt on his chair, knocked Chris on the head, gave Doug the same treatment, picked his nose, fingered his cookie, glanced at the teacher, drank his juice in one drink, looked at Doug, poked Doug's head, first with one finger and then with two,

and grinned. Eyeing Trent, Billy ate his cookie, knelt up on his chair and popped his tongue in and out. Mrs. Brown announced clean up time.

### Summary of Observation #3

This 56 minute observation yielded 316 observed and recorded nonverbal cues; or 5.6 per minute. The observation was divided into ten communication events.

Table 3 describes the situation and the quantitative and qualitative categorization of Billy's nonverbal behaviour during Observation #3.

An examination of Table 3 reveals that in this observation, which was almost half teacher-directed and half child-directed, Billy continued to emit an abundance of nonverbal cues.

Quantitatively the number of child-self and child-self-environment cues shows that most of Billy's nonverbal communication is deliberate and intrapersonal. It is of interest that the number of child-child interactions rose during the teacher directed activities in events seven to nine. The lack of child-teacher, child-group and child-observer cues indicates that Billy may prefer a one to one relationship with a peer and that he was not aware that he was being observed.

Billy experienced the longest communication event in #8 and the rise in inattentive behaviour may indicate that the activity was too long or too structured for Billy.

TABLE 3

ANALYSIS OF OBSERVATION #3

Event Situation	Quantitative Analysis										Qualitative Analysis					R	QE
	C-T	C-C	C-G	C-S	C-O	C-S-E	Cor	T	S	N.S	Att	I.Att	Intr	Inter			
1. Self directed sand play.	2	1	2	2	0	13	4	24	22	2	2	1	23	15	9	1	0
2. Microphone play, led by other child.	0	3	1	9	0	7	6	26	16	10	20	6	18	8	3	1	
3. Mini-brick & sand play.	0	4	1	2	1	12	3	23	23	0	21	2	17	6	0	0	
4. Salt play.	0	1	1	3	0	23	2	30	28	2	29	1	28	2	1	0	
5. Looking at fire station.	2	2	1	8	0	12	1	26	22	4	24	2	14	12	0	0	
6. Candle experiment.	2	0	0	8	0	4	0	14	7	7	3	11	12	2	1	0	
7. Candle experiment continued	1	5	2	12	0	15	10	45	36	9	38	7	35	10	1	0	
8. Liquid measurement	7	11	1	22	2	30	12	85	66	19	44	41	60	25	5	0	

TABLE 3 (Con't.)

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
9. Preparing for snack.	1	6	0	3	0	11	3	24	20	4	4	20	14	10	1	0
10. Snack time.	1	8	0	3	0	6	1	19	16	3	13	6	10	9	1	0
TOTALS	16	41	9	72	3	133	42	316	256	60	197	119	223	93	14	1

Key		
C-T	-	Child-teacher interaction
C-C	-	Child-child interaction
C-G	-	Child-group interaction
C-S	-	Child-self interaction
C-O	-	Child-observer interaction
C-S-E	-	Child-self-environment interaction
Com	-	Combinations of above categories
T	-	Totals
S	-	Symbolic Cue
N.S	-	Non-symbolic Cue
Att	-	Attentive Cue
I.Att	-	Inattentive Cue
Intr	-	Intrapersonal Cue
Inter	-	Interpersonal Cue
R	-	Responsive Cue
QE	-	Qualifying expression



Observation #4, February 28, 1972; 10:20 - 11:30 a.m.

Communication Event #1

The self directed period was drawing to a close. Billy was absorbed in dramatic play in the open area of the room. He and two other boys had constructed a curling rink bounded by a fence made of blocks. Billy, mouth open and eyes wide, swept frantically to control a small block which was being used as a curling rock. His broom was a little red mop from the housekeeping corner.

He lifted the mop onto his shoulder and with mouth set he picked up a small broom from the housekeeping corner and handed the mop to Raymond. Once more he swept in front of the "curling rock". The teacher intervened to say, "You are getting too noisy!" Billy stopped sweeping, looked at her for a moment, scratched his head and went back to sweeping wildly. The block flew over the fence. Billy jumped over and reached under the teacher's desk to get it, stepped back over the fence and announced, "You guys. Game's finished!"

Communication Event #2

Clean up time was announced. Billy looked at the teacher. With his mouth set he slowly began to pick up the blocks. Still eyeing Mrs. Brown he tripped with an armful of blocks. After making several trips and dumping the blocks into a box, he stopped and rubbed the back of his neck. He frowned as he looked at two boys who had been curling but were not helping to tidy. The teacher told Billy that he must put the blocks into the correct boxes according to size.

He rubbed his nose, looked at her, picked his nose, put his finger in his mouth and went back to work putting the blocks into neat piles. His top lip was over his bottom lip. He put two long blocks under his arms and used them as crutches. He then carried two on his shoulders. Raymond said, "Who won the game!" Billy put his lower lip under his upper lip looked at him, scratched his head and finally said, "We did." He then ran and skidded some blocks toward the boxes using first his feet and then his knees to push them. Mrs. Brown said, "Don't push the blocks on the floor. The janitor won't like it." Billy's mouth protruded. He scratched his ear, looked for more blocks, dropped them into the boxes and wiped his forehead as he said to Chris, "I'm hot." Rubbing his eyes he finally sat down at Table Three.

#### Communication Event #3

Billy sat at the table, hand on Gary's shoulder looking at Mrs. Brown. He shook his finger, then went to a shelf and leaned on it. He looked at Randy. Glancing at Judy he jumped up beside a boy on Table Three, but was forced to move over when Judy squeezed in. He jumped down and tried to squeeze in at the tape recorder table where once again he was pushed aside by Judy.

#### Communication Event #4

Billy wandered over to the post office with Mary. He followed her to the back shelf where they opened a box and took out some play money. Billy skipped back to the

post office, peered through the wicket then went to the side counter and said to Chris who was the postman, "I get change." Chris informed him that he did not get change. Billy went back to the wicket and looking through at Chris and informed him, "I get two cents change." When Chris made no response, Billy went back to the shelf for more play money, came to the side counter and said, "Five ... 60 stamps." Chris did not respond. Billy put his lower lip under his upper lip. The teacher again announced clean up time.

#### Communication Event #5

Billy took the play money back to the shelf and joined David who was playing with the pencil sharpener. After attempting to put a record on the record player nearby he turned the handle of the pencil sharpener as David held the pencil. Billy smiled. David laughed aloud. Billy tapped David on the head and ran to Table One. However, he returned to the record player and with his lips protruding concentrated on trying to get the record player to work. He finally tapped the arm of the player, rubbed his neck and looked at the record player intently. After several attempts he tried a smaller record but with no success. He put the records on the table and sat down. His ankles were crossed.

#### Communication Event #6

Billy was sitting alone at the record player table as snack time began. Lower lip under his upper, he got up and tried the player again. When it didn't work his tongue came out of the corner of his mouth. When Chris brought

the cookies, Billy took one and licked it, then cupped it in his hand. The noise level had risen. Mrs. Brown announced that it was "whisper day" and that everyone must whisper while the second hand on the clock went around three times. Billy looked at the teacher, his upper teeth over his lower lip. He eyed the observer and as Mrs. Brown poured some juice for him he folded his hands at the back of his head.

Billy reached over and tickled Chris under the chin. Smiling, he picked up his cookie, took a bite, then pulled Chris' ear. Billy's tongue popped out. He drank his juice tilting his head far back. As he finished his chest heaved. He put his finger on Chris' nose and Chris tried to retaliate. Billy put his hand over his ear in self defence.

A child at Table One called loudly, "Mrs. Brown, Mrs. Brown, Mrs. Brown!" Billy looked! He smiled, picked up his empty cup, and gave it a snap with his fingers, flipping it into the air. The teacher came over and asked, "You boys finished?" As she turned her back Billy snapped his cup into the air. The teacher caught a glimpse and said, "Don't do that." After she had left Billy turned his cup over and using his finger poked a hole in the bottom.

Mrs. Brown asked the children to look at the calendar. Billy looked momentarily in her direction, then looked at a boy opposite who stood up and jumped on his empty cup. Billy watched Mrs. Brown as he wiggled his finger through the hole in the cup. He lifted the cup, put the bottom to his mouth and stuck his tongue through the hole.

Suddenly Billy and two other boys ran to the garbage and tossed in their cups. Back at the table Chris said, "It's not Sunday." Billy nodded and said, "Sunday is church." As the calendar lesson continued Billy glanced at the observer and smiled. He pounded Chris on the head, got up and started away, came back, stood, and picked at his fingernails. He then reached the felt board, put two letters on it and stood fingering the letters.

#### Communication Event #7

Mrs. Brown called all of the children. Billy skipped to the open area and when told to take a partner he grabbed both Chris and Trent. Arms around each other they jumped about. After much pushing and pulling Billy and Trent became partners.

As the teacher directed them to sit and face their partners Billy sat with arms and legs folded and looked at the teacher and the group. While awaiting further instructions, he swirled around on his bottom and took Trent's hands. The teacher said, "You remember the 'mirror game'?" Billy said, "I remember! I remember!" then clutched his genitals with both hands, looked at the observer, then at the teacher and finally called loudly, "Mrs. Brown I have to go to the bathroom!" Billy ran out.

#### Communication Event #8

While Billy was out, the teacher reviewed the "mirror game" that had been taught previously. When he returned he

sat facing Trent and an argument ensued regarding who should be the mirror. Billy was vehement with, "You are! You are!" He took Trent's cheeks between his fingers and squeezed saying emphatically, "You ARE!"

The action began with Trent as the mirror. However within seconds the teacher said it was time to change roles.

Trent got behind Billy and bunted him. Mrs. Brown asked, "Do you want to change partners?" There was no reply so the new game began with Billy as the mirror. Trent pulled his eyes with his fingers, and Billy imitated the action. Trent opened his mouth very wide. Billy followed. The teacher clapped her hands for the children to listen. Billy slapped at Trent. The teacher asked, "What does a clown look like?" Billy pulled a funny face and looked at the teacher. He stood, crossed his legs at the ankles and put his hands on his feet wobbling from side to side. There was much laughing and noise. The teacher said "Zipper up!" Billy put his hand to his mouth then went back into his clown position and looked at the teacher. Still unnoticed he lay back on the floor, scratched his ear, then twisted it and scratched his nose. Trent lay beside him. Billy put his hand first on Trent's neck, then on his nose and as Trent sat up they joined hands. Trent leaned back pulling Billy over. Trent made a face and Billy imitated him. The teacher commanded, "Get up on your feet." Both boys jumped up and Billy put his arms around Trent and leaned on him. He let go and put his hands in his pockets as the teacher said

that game time was over.

Communication Event #9

It was time to "sit down for showing time." Billy jumped up into the air and sat down on the floor. He lay on one side, pulled one leg up and rested his head on his elbow. Moving closer to the group he knelt with his hands in his pockets. He looked at a book that Judy was showing. She pointed to a picture and said, "That's a violin." Billy pointed at another picture and said, "That's a banjo." Judy corrected him with, "Ukelele." Billy's lower lip went under his upper lip. He lay back on the floor, picked at his nose and felt his shoes. Rubbing his nose he looked at the group then at Betty who was clowning nearby. Mrs. Brown said, "Boys! Boys!" Billy got up, hands in his pockets, turned and moved to the back of the semi-circle where he knelt beside Trent. He looked at the teacher and then at Mary who was showing some sewing that she had done at home. As the sewing was discussed Billy knelt up high, then down, rubbed his eyes, put his hands on a chair and put a finger to one eye.

The teacher handed Billy a piece of Mary's material. He felt it, rubbed his nose and looked at Mrs. Brown who was labelling the materials "velvet" and "corduroy." Billy felt the velvet then pulled his ear and looked at Dan. His bottom lip protruded.

Dan pounded Billy on the back. Billy's tongue popped out. Billy put his hands on Dan's shoulders and

looked at Chris and David. Mrs. Brown, noticing his inattentiveness, asked Chris to leave the group. Billy pulled at the toes of his runners as Chris sat on a chair away from the group.

Billy looked at the teacher when she said that Judy would sing a song that she had made up herself. He sat on his hands, and wobbled and swayed as Judy sang. His wobbling continued as someone showed a new tooth and he said, "Me too I've got a new tooth too."

#### Communication Event #10

The teacher led the first game of Red Light. As she called the first series of colors and then said, "Red Light," Billy stopped, smiled and waved his hands in the air. The teacher saw this movement and told him to go back. As he went he bit his lower lip but began to sneak along again, smiling as the teacher called colors instead of counting. When she called "Red Light," Billy stood motionless. He then blinked and fingered his fingernails. The game ended. He hopped into the air and ran back to the starting line.

#### Communication Event #11

Trent was the leader. Billy sneaked forward two steps before the game started. Bending to hide behind a taller child, he clenched his fists and crouching moved forward as the colors were called. He was not caught. The game ended and he whirled his arms, windmill fashion, as he



returned to the starting line.

Communication Event #12

Chris was the leader. As the game started Billy, top teeth over his bottom lip, crept forward. Chris said one color then "Red Light" and turned suddenly saying, "All of you go back!" While some of the children laughed, Billy fingered his fingers, pulled his upper lip inside his lower lip, and did not go back until the teacher told him to go.

Communication Event #13

Karen was the leader and Billy got caught on the first "Red Light". He went back and sat on the blocks. He took one careful step, fingered his hair, rubbed his head and ran forward only to be sent back. He ran into the cloakroom and returned a moment later scratching his nose. The teacher announced story time.

Communication Event #14

As the children prepared for story time, Billy sat on his feet, wrestled with the boy beside him, sat on his knees and then held onto his genitals.

Fingering his fingernails he looked at the book that the teacher held up. He clasped his hands, fingered his fingernails, pulled on his thumb and with his eyes still on the book scratched his shoulder. Billy rubbed his ear and put his finger into his mouth to touch a tooth. Returning his hands to his lap he watched the book, opened his mouth, put his top teeth over his bottom lip, closed his

mouth and, as the story continued, repeated this series of mouth movements several times.

When the teacher pointed to a picture in the book and asked, "What does this look like?", Billy opened his mouth to answer and began, "That sorta looks like," but stopped when he was cut off by the teacher who did not hear him and said, "What does it look like Gary?" Billy eyed Gary, put his hands on his lap, and looked at the book as the story continued.

Mrs. Brown whistled imitating a whistle in the story. Billy smiled, then his mouth drooped at the corners and his mouth movements began again. They grew stronger and his teeth, lips and tongue became involved as the story reached a climax. Billy sat motionless with eyes intent upon the book, until the story ended.

#### Summary of Observation #4

This observation which was 65 minutes in length yielded 413 nonverbal cues; approximately six per minute. There were 14 communication events.

Table 4 indicates the situations, and the quantitative and qualitative analysis of Billy's nonverbal behaviour during Observation #4.

This observation was a mixture of child-directed and teacher-directed activities. There were approximately 21 minutes of teacher dominated activities in Events #7,8,10 and 14; seven minutes of child-directed activities in Events #1, #3, and #4; and 37 minutes in which there was combined

TABLE 4

ANALYSIS OF OBSERVATION #4

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
1. Dramatic play 'curling'.	0	0	0	4	0	8	1	13	10	3	12	1	13	0	1	1
2. Clean up time.	2	0	1	20	0	25	4	52	32	20	34	18	47	5	1	1
3. Free movement.	1	3	1	1	0	4	2	12	12	0	3	9	6	6	0	0
4. Post office play.	1	2	0	1	0	12	1	17	16	1	1	16	14	3	1	0
5. Clean up for snack.	0	3	0	7	0	24	4	38	28	10	33	5	31	7	0	0
6. Snack time.	4	11	0	15	3	25	1	59	45	14	18	41	40	19	1	1
7. Mirror game.	0	2	4	3	1	0	1	11	8	3	4	7	5	6	3	1
8. Mirror game. (Con't.)	4	11	0	17	0	0	0	32	22	10	11	21	17	15	4	1
9. Showing and sharing.	5	6	4	38	0	4	2	59	27	32	25	34	42	17	7	0

TABLE 4 (Con't.)

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-F	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S.	Att	I.Att	Intr	Inter	R	QE
10. Playing Red Light teacher leading.	0	0	0	9	0	0	1	10	7	3	8	2	9	1	2	0
11. Red Light child leading.	0	0	0	8	0	1	0	9	5	4	6	3	9	0	0	0
12. Red Light child leading.	0	0	0	11	0	1	1	13	8	5	8	5	12	1	1	0
13. Red Light child leading.	0	0	0	10	0	3	0	13	8	5	5	8	13	0	0	0
14. Story time.	0	2	0	59	0	6	0	67	12	55	66	1	65	2	2	0
TOTALS	17	40	10	203	4	113	18	405	240	165	234	171	323	82	25	5

TABLE 4 (Con't)

Key		S	
C-T	Child-teacher interaction	S	Symbolic Cue
C-C	Child-child interaction	N.S	Non-symbolic Cue
C-G	Child-group interaction	Att	Attentive Cue
C-S	Child-self interaction	I.Att	Inattentive Cue
C-O	Child-observer interaction	Intr.	Intrapersonal Cue
C-S-E	Child-self-environment interaction	Inter	Interpersonal Cue
Com	Combinations of above categories	R	Responsive Cue
T	Totals	QE	Qualifying expression

teacher-child direction in events #2, 5, 6, 9, 11, 12 and 13. There is a noticeable decrease in Billy's nonverbal child-child interaction when the teacher or a child is directing an activity such as the game Red Light, but an increase when the child directs himself even in an activity in which the teacher is the initiator, for example, snack time and sharing time. The interaction between child-self and environment dominates all events with the exception of those that are games directed and initiated by the teacher.

Qualitatively Billy again indicates a predominance of symbolic nonverbal behaviour although in his observation the ratio between attentive and inattentive nonverbal behaviour is narrower. His intrapersonal behaviour is almost four times as great as his interpersonal behaviour.

Although the number of nonverbal cues categorized as responses is higher than in previous observations, the number that qualify verbal expression remains small.

Finally, Billy appears to be unaware of the observer most of the time.

#### Billy: Conclusions

Billy appears to emit a high content of nonverbal communication. In 255 minutes of observation there were 1318 nonverbal cues recorded or 5.7 per minute. For this child the quantity of nonverbal communication appears to be a significant factor in his total communication pattern.

Billy's nonverbal interaction is highly intrapersonal. Nine hundred of the cues emitted were involved with his "self". This is 68% of the total interactions recorded.

There appears to be a relationship between Billy's nonverbal communication and the classroom situation. Examination of the Tables 1 to 4 indicates that Billy emitted 670 nonverbal cues during teacher directed activities, 485 during totally child directed activities and 163 during events that were teacher initiated but in which the child was free to carry out the activity for example clean up and snack times. Billy seems to reveal more nonverbal communication during teacher directed activities and teacher initiated activities. The combined totals in these situations is 833 emissions which is 63% of the total nonverbal interactions recorded.

Billy's nonverbal communication is 68% intrapersonal

and therefore it appears that his nonverbal communication is related to his affective state.

Billy's mother appears to be aware of the way in which Billy manifests his feeling nonverbally for she mentioned his fingering his fingernails and holding his genitals when he was nervous and worried. The data indicate that he did indeed finger his fingernails frequently and his genitals at times.

Mrs. Brown has perceived Billy as a quiet child and the study substantiates this. However she did not relate this to his emotional state, nor did she indicate awareness of the nervous habits pointed out by his mother.

While Mrs. Brown viewed Billy as a child who had no worries, his mother was incongruent with this view for she was aware of his fear of monsters and certain television programs. She has also noted Billy's reaction to correction while the teacher was not aware of similar reactions at school.

Billy's nonverbal world as revealed by the observations seems to substantiate the mother's view that recently Billy is beginning to assert himself as he did in the "Mirror Game". It also substantiated the teacher's view that he is somewhat indecisive and not an initiator.

The observations reveal that Billy spends considerable time seeking out friends or groups that will accept him and that in an effort to get attention he may emit negative nonverbal cues such as poking other children with



the paint brush. However it seems that more of his nonverbal cues are related to his inner self for there were many eye movements from one child to another, mouth movements when he was upset or concentrating, fingering fingernails and handling his genitals. During Observation #2, which was totally self-selected and self-directed, Billy spent much of the time moving from one area of the room to another as if he were searching for security.

## CHAPTER 6

### MARY

#### Mary at Home

Mary was born in December 1966. Her mother is a nurse and her father a lawyer. She has one older sister and two older brothers. Mary's mother could give limited information regarding Mary's very early months because she was adopted when she was 15 months old.

As an infant her medical needs were met at the Public Health Clinic in South Edmonton. She was anxious to feed herself and after learning this she did not revert to wanting to be fed. Small of stature her mother describes her as a "picky eater". She eats foods she likes very quickly. Oranges are devoured but if she doesn't like a food she will sit "for a whole hour with it on her plate." She enjoys family discourse at the dinner table and will get annoyed and beg for a turn if she is left out of the conversation.

Mary has always been a good sleeper, and is not attached to a bed time comfort such as a toy or having a story read to her. Sometimes in the morning she will crawl in with her parents.

Mary's mother calls her a very affectionate child. She describes Mary's early life and arrival at her new home:

I don't know much about her early background but we

were her third home. The second family wanted to adopt her. The mother had eight children. They were a good Catholic family. The social worker walked in one day and we don't know what happened, but it apparently was a rather drastic situation. That child was removed from that home immediately. They didn't even look for another foster home, but arranged for us to get her as quickly as possible, because she was a very disturbed child. She was terribly upset at having to leave that home, because I gather the mother did love her. When we went to get her she didn't want to come near us and she didn't know that social worker. We didn't meet her at her best. She was terribly emotionally upset and in a dreadful state. When we got her home she just clung to me. She didn't know who was her mother and she wouldn't go near my husband. She absolutely screamed. There was some man in that background who must have done something cruel or harmful to her. It took a whole year for her to warm up to her new daddy...she wouldn't go near him and he worked so hard at it. She was petrified. Then we realized that it wasn't just my husband. She was afraid of any man.

Mary's brothers and sister welcomed her to the family by taking her from door to door in her stroller, "showing her off." Unfortunately there were no young children in the neighborhood during her toddlerhood, so she played by herself a great deal and was content "to be on her own." Her mother now makes a point of having playmates in although it is just during the past year that Mary has wanted this. She would stay in the background and wouldn't play with other children until she went to playschool when she was four. There, her mother says, she learned to socialize.

Mary has always enjoyed her bathtime. She and her brother played with boats when they used to bathe together. She was apprehensive about having her hair cut for the first time.

Her mother explained:

She was meeting a new situation again and she had

met so many new situations in her first year...she was so nervous, she cried. She didn't react to having her fingernails cut because I did it. For the first six months anything that mother did to or with her was fine but if anyone else was involved it made her apprehensive. She seemed to be afraid that she might be taken away and I stayed with her almost continually that first six months.

During that time Mary had to go to the emergency ward to have a very large sliver removed. Her mother's description of her reaction to this experience is interesting:

...she didn't say a word. She lay like a statue and didn't say one word. The nurse was absolutely amazed because most children carry on. She had to lie out flat. She just looked straight up as tense as could be. I held her hand and could feel that she was so nervous that she was terrified. But when it was finished they said, "What a good girl!"

Mary adores her father now and will run up to him and kiss him. She is no longer afraid of other men and accepts new situations in a casual fashion. For example when her adoption was explained to her she went up to one of her parent's friends and said, "Know what? I've got two mummies." Each year Mary has overcome more of her insecurities. "I don't think she's afraid of anything anymore," her mother smiles.

Mary's mother says that Mary has no really consuming interests. She is the "easiest child to raise and the only one in the family who has just fleeting interests." Mary's mother elaborated:

She finds nothing constructive to play. She'll go and play the piano and sing a little bit, then sit and look out of the window, as happy as can be...If I get a game out to play with her, that's fine. She's happy to go along with it, but it doesn't last long... She'll play with anything if someone will play with her... She's happy playing alone but on the other hand loves

to have children to play with.

Mary is becoming more independent; sometimes she likes her mother to dress her, "because she is the baby," other times she insists on doing for herself things that her older siblings can do, such as cutting her meat and buttering her bread.

Because she is the baby of the family, her mother feels that she had no one to organize and so has not developed leadership qualities. She calls her a co-operater rather than a follower and says that she is nonaggressive. When a situation is stressful she will remain in the background. However when her siblings tease her, she yells and screams that they are beating her up and in self defense she will try to kick them. Mary does not seem to resent correction.

When Mary brings work home from school she can "hardly wait to show" her parents. Although her efforts may not look as finished as many of the older children's in the class, Mary's mother does not feel that Mary compares her efforts with others. Her mother uses Judy as an example. Judy is the only strong attachment Mary has made outside of the home. She is older and, according to Mary's mother, aggressive and capable. She takes Yamaha music lessons, ballet, and swimming while Mary has not begun such activities. Mary's mother explained the relationship between the two girls as she sees it:

We are not going to push little Mary. She wants to take piano lessons but you cannot push that child. She's

too young for piano lessons...she makes no comparisons between herself and Judy. Judy is bright and gay and she has fun with Judy and thinks she's marvelous. Mary enjoys this because she's a part of it with Judy. Otherwise she's in the background. She really doesn't compare herself with Judy or she wouldn't want to play with her.

While Mary's mother was not aware of any nonverbal behaviour that was indicative of her emotional state, she said in conclusion:

If she's home by herself with me in the afternoon, and I'm busy, she can wander around for three hours and is happy. I don't know what she does all the time. I feel guilty and ask her if she'd like a little game or something but this only lasts for about five minutes. I don't know what the child does. Oh she'll sew now for a little while, play the piano a bit and look out of the window. I honestly don't know what she does and nobody could be so happy alone.

#### Mary at School

Mary seems to puzzle her teacher somewhat. She seldom seeks attention from Mrs. Brown, who feels that Mary is an insecure child. When Mary is having difficulty or is not sure about something she is doing she will leave the activity rather than persist or seek help.

If it is necessary for the teacher to correct Mary or direct her to something she should be doing "she gets a very ... almost hurt look on her face."

Although Mrs. Brown was not aware of any specific fears that Mary might have, she felt that this may be because she sees Mary as "somewhat of an introvert." In the school situation she is happy enough but does not exhibit exuberance about anything. Mary likes to be with other

children and Mrs. Brown has noted her strong attachment to Judy. Manipulative tasks that require fine co-ordination seem to frustrate Mary but she does not put her feelings into words. She accepts new situations in the kindergarten quite well, but if she feels that Mrs. Brown is correcting her "her face will stay toward me but her eyes don't look at me...she has an almost wounded look."

At the beginning of the term Mrs. Brown found Mary very inattentive to tasks but she feels that she has improved. Her teacher now considers her an active rather than passive participant in group play but a follower rather than an initiator.

Mrs. Brown summed up her view of Mary:

She's fairly popular. She doesn't spend much time alone...I think the outstanding thing about Mary is the way she shows her personality nonverbally... When things aren't just suiting her she gets a worried look on her face and shows it in her eyes... For some reason I've noticed this several times when she's concerned. Quite often she stays and waits for her sister and if I don't allow her to go out of the room to wait at her sister's room... Now whether she's afraid her sister is going home without her or whether she just wants to be in the hall and I say no, her eyes become very very hurt, but she doesn't say anything. She's an easy child to handle.

#### What Mary Does at Kindergarten:

##### Her Nonverbal Behaviour

Mary is a tiny slight built youngster compared with her peers. Blonde and blue eyed she seemed to bounce about the classroom seeking satisfaction in an almost wistful fashion.

Observation #1, February 16, 1972, 8:57 - 10:00 a.m.

Communication Event #1

Mary had walked to school with her sister who seemed to push her in the door. There she stood, taking off her coat and letting it drag on the floor as she peered about the room. The teacher asked who knew where the mail box was and she raised her hand and said, "I do." Then waving her boots she ran to the cloakroom and returned instantly with her runners in her hands. After putting her runners on the floor she supported herself by putting her hand on a chair and from a standing position pushed her toe into a shoe. She then sat down and tied it.

Mary looked at the teacher who was talking to a boy. She watched them intently, looked at the observer then back at the teacher and back at the observer. She put her other toe in a runner and sat down and blinked as she concentrated on tying it.

Communication Event #2

As Mary finished tying her shoe the teacher asked her how she was doing. Mary merely looked up at her, then went to a table, leaned on it and watched a group at play.

When asked by the teacher if she would help to water the plants, Mary jumped into the air and said, "Sure!" With another girl she went to the teacher's desk where she curled her lips while the other child had the first turn. When her turn came, she tilted her head, dipped the tin in



the water and standing on her tiptoes she poured some water on a plant.

Skipping to Table One Mary picked up the microphone and holding it close to her mouth wobbled her head from side to side. This was interrupted by the teacher who reminded her to put her watering tins away. She ran to the teacher's desk, picked up the empty tin, and on the way back to the shelf heaved the remaining drops of water into the air.

### Communication Event #3

Mary went to the picture table where she looked at a picture, picked it up and looked at it again. She moved to the teacher's desk and when she heard the teacher's voice coming from the tape at Table One she smiled, ran over and stood with the toes of one foot pointed up and those of the other pointed toward the floor. She watched the children working with the tape recorder, rubbed the back of a boy in front of her, looked at Raymond, and smiled as she got up and knelt on a chair. She grabbed Betty who was beside her and tickled her saying, "Yak yak!" Betty pushed her away! The teacher intervened with, "Mary I'll show you how." Mary moved in close to the teacher and she leaned on the table as the teacher explained the use of the recorder.

Mary tugged at Betty's braids again and said, "I'm going to tie your hair." The teacher handed Mary the microphone and asked, "Mary what did you see when we went to the zoo?" Mary shook her head, backed away and refused the microphone. She tickled Betty once more and left the group.

Communication Event #4

After wandering around the room Mary came back a minute later and pushed into the group. She tried to climb on a chair beside Randy. He objected. Mary ran around the table, pushed into a space, put her elbows on the table and leaned right over the recorder in front of some of the children. She folded her arms, looked at a boy beside her, wobbled her head with her mouth set, and then got down and went around the table.

The teacher said, "Mary would you like to get me your words?" She was referring to the "key vocabulary." She put her arm around Mary as she made the suggestion.

Communication Event #5

Mary picked up her pack of words and skipped to the teacher's desk. Mrs. Brown sat while Mary stood beside her. The teacher began to flip through the cards as Mary read them. When Mrs. Brown tried to teach her to round her mouth to enunciate 'o' she looked at her but her lips remained closed. Glancing at the observer, Mary opened a book that was on the teacher's desk and ignored the teacher who was holding up a word card. When Mrs. Brown said, "Look here Mary," Mary dropped the book and put her hand on the desk. The teacher asked her what a 't' looked like. She said, "I know a 't' down and across." The teacher held her hand and helped her to make the letter with her finger.

The lesson over, Mary took her words and the book to a table where she stood until her searching eyes found

Judy. She called, "Judy!"

Communication Event #6

Mary was standing at Table Two when she noticed a group of children dancing about with puppets in their hands. She went to the teacher's desk where Judy was now working with the teacher at her word cards. Mary picked up some cards, put them down, went to the back shelf, picked up a puppet and put it on her hand. She giggled and went to the door of the puppet house, where she was greeted by a voice from within, "You're not in this!" Mary backed away, her lips protruding, she shook her head and went to watch a group at Table Three. She seemed rejected. There she stood, fingering the puppet and looking around the room.

Finally she approached Betty, spoke to her, and together they went to watch a girl gluing. Mary wrinkled her nose and said, "I want a puppet show!" She stood for a minute, and then followed Betty around the observer, sucking her puppet as she went. Still following Betty, she seemed once again to be rejected by a group at Table Two. Mary pushed the puppet at a boy's face and looked at him. He tried to push her. Mary went behind the table alone. She stood and watched the teacher and a group at the puppet house. She circled the room, spoke to a child, got no response and wandered toward the teacher who was near the puppet house. However she wandered back to Table One, where she looked at a group. Her eyes focussed on the post office where Judy was playing. She went over and stood beside Judy.

Judy said, "Come on!" They ran to the shelf where they each picked up a puppet. Mary said, "Let's get all of the puppets." Together they disappeared into the storage area.

#### Communication Event #7

Mary and Judy reappeared a minute later and crawled into a large wooden crawl box. First one of Mary's legs popped out and then the other as there was much chattering in the box. Judy came crawling out. Mary followed. Judy said, "Come on, let's go!" They ran to the shelf area and disappeared from view.

#### Communication Event #8

Half a minute later the two girls reappeared and as they ran to the storage area, Mary called her teacher but got no response. She ran into the storage area with Judy, came skipping out sideways, and disappeared again.

#### Communication Event #9

Mrs. Brown went to the storage area and came back with a bag of puppets, which she opened. Mary and Judy came and chose one each. A child beside the puppet house announced, "The puppet show is going to start," and as the other girls began to arrange chairs for the show Mary said loudly, "No!" and disappeared into the crawl box with Judy.

#### Communication Event #10

Judy came out of the box and joined the group for the puppet show. She called Mary and told her to come but

there was no response. Judy peered into the box and said, "Come on!" Mary answered, "No!" Judy crawled in with her. There was much verbalization within the box as they planned their own puppet show. Mary called Mrs. Brown, but got no reply. As the puppet show proceeded Mary and Judy remained inside the box talking loudly. The teacher went to the box and reprimanded them for making so much noise. Mary's head popped out. She looked up and said, "Sorry," but as Mrs. Brown walked away she began to sing. The teacher called, "Who's inside that box?" Judy came out, but Mary did not appear.

#### Communication Event #11

After five minutes Mary crawled quietly out of the box, and looked through the post office wicket at the group watching the puppet show. She skipped to the group and gave a girl a push as she passed. She squeezed between Judy and the aide who were sitting on a table. Picking up a roll of scotch tape she showed it to the aide, crossed her legs, uncrossed them, crossed them again, fingered the scotch tape, and looked at it. She did not look at the puppet show.

#### Communication Event #12

When the teacher said that it was time to "make letters," Mary followed Judy to the table where paper was laid out. She picked up some paper and again followed Judy as they went to get pencils. Suddenly the puppet house collapsed. Almost every child reacted by turning to look,

smiling or running to help. Mary ignored the commotion completely. She picked up her pencil and stood legs astride leaning over the table and with what appeared to be great concentration began to draw. After a few seconds she dropped the pencil, picked up a crayon, slumped one shoulder and with great haste began to color. A child nearby asked for a chair. Mary shoved a chair in her direction and without looking up said, "You can have mine!"

As she finished coloring she pointed to herself and said, "I don't know how to write, 'from Mary'." Dan took her pencil and she stood aside as he printed "from" for her. As the teacher discussed whether "from" ended in an "m" or an "n", Mary wobbled her head and began to write. The teacher moved closer and Mary put her pencil into her mouth, looked about, and said something to herself about "writing". She opened her mouth, scratched her head, and blinked as the teacher went to the blackboard to explain. Mary put her pencil in her mouth, pointed at the teacher, and said, "Watch her." Mary smiled when Judy joked with Vivian by saying, "Wouldn't it be funny if Vivian wrote 'Love Valentine' instead of 'Love Vivian'?"

### Communication Event #13

Mrs. Brown invited the children to come to a small table to see the new kinds of crayons. Mary went to look and said, "We get this kind at home." Left alone at the new box she picked up four crayons and went back to her work. Pulling one leg up, kneeling, putting her legs down, pushing

crayons around, dropping them and watching other children, Mary proceeded. She made no response when Mrs. Brown patted her on the head. Finally she leaned across the table to show her picture. As she went back to work she seemed to become aware of the teacher talking with another child. Mary colored, but her coloring was interspersed with glances at the teacher, squinting, blinking and mouth movements.

Communication Event #14

Mary left her work and went to the new box of crayons. She put her hand into the box, rubbed her eyes, and looked at the teacher who was still interacting with the other child. She rubbed her eyes again and suddenly ran to Mrs. Brown saying, "Mrs. Brown. Mrs. Brown. There's gray too!" Her legs wiggled as she said again, "There's gray too!" Mrs. Brown did not reply.

Mary moved the crayon box and another child said, "Stop!" Mary said, "I don't have to," frowned and blinked. She watched the observer for a few seconds and moved the crayon box again. The other child said, "You're not supposed to do that." Mary looked at the observer and went back to work. Mary picked up her picture and shook it as she glanced at Judy and the observer. She puckered her mouth and picked at the paper wrapping on a crayon. Mary blinked, looked at Judy, and then at Daniel. She climbed on a chair and knelt but was pushed by Judy. She moved over, then got down, took her picture and went around the table.

When Judy spoke to her she looked up, tapped her pencil on her picture, and smiled. Her lips protruded as the children at the table conversed. With much wiggling, tapping and dropping of her pencil Mary finally picked up a crayon and bit it. She picked up her picture and brought it to the observer and said, "Write Love Mum and Dad."

#### Summary of Observation #1 Mary

This observation was 53 minutes in length and yielded 290 observed nonverbal cues; or 5.5 per minute. There were 14 communication events.

Table 5 indicates the situation and the quantitative and qualitative analysis of Mary's nonverbal cues during each event.

An examination of Table 5 reveals that only one event was teacher-selected and teacher-directed, while two events were teacher-selected but child-directed routine tasks. Eleven events were child-selected and child-directed activities. Of the 290 nonverbal cues emitted, 166 were intrapersonal and 124 interpersonal. Mary interacted nonverbally much more with the children than with the teacher for a total of 67 and 21 respectively.

Most of Mary's nonverbal behaviours during this observation were symbolic and attentive.

Mary used her nonverbal behaviour to qualify a verbal response 14 times. Some qualifying responses could have been missed when she was inside of the crawl box. A new category of response presented itself during this observation. Four



TABLE 5

ANALYSIS OF OBSERVATION #1 MARY

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
1. Arrival putting on runners.	2	1	0	0	2	5	9	19	17	2	14	5	5	14	1	0
2. Watering plants	3	4	1	4	0	18	3	33	30	3	31	2	25	8	4	2
3. Varied child directed activities.	6	8	3	6	0	4	2	29	27	2	17	12	6	23	0	2
4. Self-directed tape recorder.	1	2	1	2	0	5	2	13	10	3	7	6	9	4	1	0
5. Key vocabulary with teacher.	2	1	0	3	1	4	3	14	8	6	7	7	6	8	6	1
6. Preparing for puppet show.	1	11	7	12	0	10	1	42	38	4	37	5	22	20	2	2
7. Hiding in crawl box.	0	3	0	1	0	3	0	7	7	0	7	0	4	3	1	0
8. Moving about room.	0	3	0	0	0	0	1	4	4	0	4	0	0	4	0	0

TABLE 5 (Con't.)

Event Situation	Quantitative Analysis											Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	OE	
9. Getting puppets.	0	1	0	0	0	0	2	3	2	1	2	1	0	3	1	1	
10. Sitting in crawl box.	0	1	0	1	0	0	2	2	2	0	2	0	1	1	2	1	
11. Joined class at show.	0	1	2	7	0	3	0	13	8	5	8	5	10	3	0	0	
12. Making pictures.	1	3	2	6	0	20	4	36	26	10	35	1	29	7	2	2	
13. Picture making Con't.	2	2	0	11	0	18	3	36	27	9	36	0	28	8	3	0	
14. Completing pictures.	3	8	2	6	3	14	3	39	33	6	36	3	21	18	2	3	
TOTALS	21	49	18	59	6	104	33	290	239	51	243	47	166	124	24	14	



of Mary's twenty-four nonverbal responses to an action or verbalization were negative responses. She either did not respond when a response was expected or she responded negatively.

Observation #2, February 21, 1972, 10:30 - 11:28 a.m.

Communication Event #1

It was snack time. Mary sat at Table One licking her fingers. She stood up, glanced at the teacher and a group of children at Table Three, and then sat down with her toes on the floor and her heels raised. As she drank her juice she looked at the girl on her left, then picked up her cookie and licked it. She picked up some crumbs from the table and ate them. After eating her cookie she stood up and pulled the hair of the girl beside her. She whispered in the girl's ear, sat down and drank some more juice.

When she had finished, she stood up, and with one knee on her chair put her elbow on the table and sat on her foot. She pulled on the lace. Mary looked at the teacher who was talking to Lynne. She glanced at the aide. Pointing her toes to the floor and with her heels raised and laces loose, she pulled one heel out of a shoe and stood up. She poked a hole through the bottom of a cup and she looked at another girl. Mary then noticed that the teacher was pulling a plastic tube out of a pail of water at Table Three. She went to join that group.

Communication Event #2

The observer had to move to gain full view of Mary. Mary was leaning on Table Three, eyes on the teacher, tongue out, mouth opening and closing. She gazed into space, bit her bottom lip and leaned on the table. She raised her eyes to look as the teacher demonstrated how to syphon water from

a pail on the table to a pail on the floor. Looking at the teacher, she leaned over the edge of the table and as the water stopped flowing she said, "It stopped."

Mrs. Brown asked Mary to hold the hose above the pail which was on the table. Mary took hold of it but when a boy took hold too, she gave him a shove, scowled, and said, "I'm doing it!" As Mrs. Brown sucked the tube to start the water flowing, Mary squeezed the hose, and watched the children. She pinched the hose near the edge of the pail on the table and smiled when the children exclaimed that the water had stopped flowing into the pail on the floor. Mrs. Brown then lifted the pail from the floor to a higher level than the pail which was on the table. Mary squeezed the hose. No one noticed. As Mrs. Brown lowered her pail Mary stopped squeezing and the water squirted. Mary smiled. She then pulled the hose out of the water and leaned over to watch the reactions. Just then Judy squeezed in beside Mary and Mary quickly put the end of the hose back into the water. Once more Mary leaned over the edge of the table and surreptitiously pulled the end of the hose out of the water. Judy saw what she had done and said vehemently, "Mary! I won't be your friend anymore!"

Mary looked at Judy. Judy got squirted! The teacher said, "Who hasn't had a turn to hold the hose?" Mary jumped from the table and taking the hose near the pail on the floor she said, "I haven't held it here." However the teacher took it from her. Mary left the group.

Communication Event #3

The observer followed Mary and found her in the cloakroom. Alone, she climbed up on a box, ran out toward Table Three, but went back and climbed on the box again. Using both hands she hung from a shelf, let go and hung by one hand from a coat hook. She glanced at the observer (the only person in view), ran out and called, "Judy, Judy!" but got no response.

Mary looked about, went to a shelf, got a handful of crayons and took them to a box at Table One. When the teacher called, "All come for story time," Mary did not respond. She got some paper and at Table One chose an orange crayon, put her elbow on the table and began to color. As she worked she changed colors frequently.

Mary went on with her work and glanced at the teacher when a boy was chastised for talking during story time. She leaned far over the table and worked quietly.

Mrs. Brown read, then stopped and said to two other girls, "No talking. Otherwise come for the story." Mary eyed the teacher, opened her mouth, closed it, and moved her lips. When another girl told her it was time to come for the story, she said, "I don't care," and then she tossed her head. Judy who was also coloring, spoke to Mary. Mary glanced at Judy, dug her hands into the crayons, and said, "Shssshh, we have to be quiet."

Mary picked up her picture, looked at it, held it up for the group at the table to see, and looked at Dan as

he showed his picture. Mary took a red crayon, screwed up her mouth, and went back to work. She stopped, rested her chin on her hands, fingered the crayons and watched the story time group. Mary went back to work. As she colored, she glanced at the story group occasionally. She popped her tongue in and out, leaned on the table, changed crayons and sometimes frowned. Finally, Mary picked up her picture and moved toward the teacher. With her mouth puckered, she hesitated, then went back to Table One.

#### Communication Event #4

Mary took her picture to the aide who was sitting at Table One. She got an envelope and a pencil and stood watching as the aide printed on the envelope. Taking the bottle of glue in her hand, Mary left her envelope on the table, got more paper, took a red crayon, dropped it, and went to a shelf for a pair of scissors. Back at the table, she glanced at the observer, cut a small rectangle, glued it to the envelope as she would a stamp, and colored it red. She folded the picture she had made, put it in the envelope, and with the envelope in hand, skipped to join the story group. On the envelope the aide had printed as Mary had dictated, "To Judy."

#### Communication Event #5

With her letter in her hand, Mary knelt between Tracy and Frank, eyes on the teacher, mouth closed. Mrs. Brown was discussing fire and oxygen. She said the word,



"smother" and as she demonstrated by putting her hand over her mouth and nose, Mary imitated her. The story "Fireball a Fine Dog" continued. Mary looked at her envelope and smiled. She glanced at the story book, fingered her envelope, wiggled her legs and kept her eyes on her envelope. When Frank poked her letter, her mouth protruded.

As the story continued Mary pulled at Tracy's apron, glanced at the observer and frowned. The frowning continued as the group discussed fire rules and experiences with fire. Dropping her envelope she looked at the teacher, played with her fingers, looked at Tracy, then at the observer, bit her bottom lip, closed her mouth, looked at the observer again and, pulling her mouth into a "scroogie" shape, she blinked. She continued this kind of nonverbal communication until the teacher asked a question. She put up her hand in response. The teacher asked another child to answer. Mary's mouth dropped open. Her chest heaved in a sigh and her hand went slowly down. When another question was raised, Mary glanced at the observer as she put her hand up again. However Judy was chosen to answer. Mary put her hand down, twiddled her fingers, played with her shoes and shot her hand up when a third question was asked. Judy responded spontaneously. Mary scowled and rubbed Tracy's hair. Finally the teacher said, "Have you something to tell us, Mary?" Mary bobbed up and down and said, "My Daddy tells us about fire!" She picked up her envelope again.

Communication Event #6

As the story time ended the teacher announced that Betty wanted to do a Ukrainian dance. Mary glanced at Betty, put her envelope to her nose and then into her mouth, and bit it hard. She laid the letter on the floor, looked at it, scratched her leg, popped out her tongue and said, "Feet, feet, I like feet!"

As the dance proceeded Mary looked up at Frank who was standing beside her. She then crawled forward and when the teacher asked that they move way back, she took her envelope in her hands and slid back. She smiled, whispered to a girl on her left, and then silently clapped her hands to the rhythm of the dance. She whispered to Judy, looked at Betty dancing, raised her brows, looked at the observer, smiled and continued to clap quietly until the dance ended. She moved forward, and leaned on Judy.

Communication Event #7

Mrs. Brown called the children to the record player corner to listen to a "talking story book." The teacher held the book and showed the pictures, and the record played the script. Mary walked slowly behind the group as it moved toward the corner. She sat on the edge of a chair near Judy. Sliding to the floor on her knees, she stroked the hair of the girl in front of her.

The story, "Too Much Noise," proceeded. Mary took a toy from a shelf and set to work lacing it, glancing now and then at the book. She put the toy back, took a Romper

Room insert and number toy and concentrated on it. Her mouth puckered. When she had finished with it she put it back on the shelf and took a box of "snap together jewelry" which she played with for a few seconds, then returned it to the shelf, stood and fingered some boxes on the shelf.

Noticing a puppet on the top shelf, she looked at the teacher, then back at the puppet, and back to the teacher before she picked up the puppet and put it on her hand. She knelt and squeezed the puppet. It squeaked and the teacher reached over, took it and put it back on the shelf. Mary's mouth protruded as she put her hands on her lap. Her eyes focussed on the toys on the shelf as the story time concluded.

#### Summary of Observation #2

This observation which was 58 minutes in length yielded 352 nonverbal cues; approximately 6 per minute. There were seven communication events. Table 6 indicates the situations and the quantitative and qualitative analysis of Observation #2.

An examination of Table 6 reveals that although all events are teacher-initiated and six are teacher-directed Mary was more involved with her "self" than with the teacher or the children. Her interactions with the teacher and with individual children are 25 and 26, respectively, while there is only one which is categorized as child-group. However 261 interactions are child-self or child-self-environment, thus revealing that 75% of Mary's nonverbal communication during this observation was related to her inner self.

TABLE 6

ANALYSIS OF OBSERVATION #2 MARY

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
1. Snack time.	3	3	0	26	1	10	3	46	38	8	15	31	36	10	1	0
2. Lesson on syphon.	5	5	1	15	0	12	4	42	29	13	30	12	29	13	1	6
3. Story time and letter.	3	7	0	18	1	53	8	90	83	7	12	78	72	18	2	4
4. Story time and letter (con't.)	2	0	0	8	0	18	5	33	25	8	1	32	28	5	1	0
5. Mary in story group.	5	2	0	25	6	11	5	54	35	19	6	48	41	13	5	1
6. Watching Ukrainian dance.	0	6	0	14	1	6	3	30	18	12	9	21	23	7	3	2
7. Talking story book	7	3	0	11	0	34	2	57	52	5	7	50	47	10	1	1
<b>TOTALS</b>	<b>25</b>	<b>26</b>	<b>1</b>	<b>117</b>	<b>9</b>	<b>144</b>	<b>30</b>	<b>352</b>	<b>280</b>	<b>72</b>	<b>80</b>	<b>272</b>	<b>276</b>	<b>76</b>	<b>14</b>	<b>14</b>

TABLE 6 (Con't.)

Key		S	
C-T	- Child-teacher interaction	-	Symbolic Cue
C-C	- Child-child interaction	N.S	Non-symbolic Cue
C-G	- Child-group interaction	Att	Attentive Cue
C-S	- Child-self interaction	I.Att	Inattentive Cue
C-O	- Child-observer interaction	Intr.	Intrapersonal Cue
C-S-E	- Child-self-environment interaction	Inter	Interpersonal Cue
Com	- Combinations of above categories	R	Responsive Cue
T	- Totals	QE	Qualifying expression

Qualitatively Mary's nonverbal communication was predominantly symbolic and inattentive. Similarly her emissions were largely intrapersonal with only 76 cues categorized as interpersonal. Only 14 nonverbal cues were emitted as responses and the same number as qualifying a verbal expression.

Observation #3, February 28, 1972, 9:04 - 10:14 a.m.

Communication Event #1

Mary and her sister said goodbye at the door and Mary went into the cloak room. She reappeared for a second. Her coat was open as she disappeared again. A moment later she stood inside the room, looked about and blinked.

When the teacher asked her if she had read to her Mummy, Mary did not answer. She put a book on a table and rubbed her hand over her hair. In response to the teacher's request she ran to the shelf, stood, blinked and put the book into a box.

As the self-directed period began Mary glanced at the observer and went toward the word chart where she stood holding a brown paper bag in her hand. Scrunching the bag and wiggling her body she talked to the teacher, who was holding the microphone. Mary discussed puppets with Mrs. Brown, then blinked, opened her mouth and picked up a puppet which she fingered as she bent to peer into Raymond's face. She wobbled the puppet as she watched the teacher and the children who were working with the tape recorder.

After depositing the puppet on the shelf she smiled and joined the group. She shook her bag up and down and the aide asked, "Why don't you say something Mary?" She was referring to speaking on the microphone.

Communication Event #2

Mary went to the aide and opened the bag showing her

the sewing that was inside. Mary's head bobbed as she told Marie about the things she had made. She turned, put her elbows on Table Two, looked at the table, took a pencil, and went to the end of the table to get the book that she had brought. Carefully Mary traced her name which she had previously printed on her book. Her eyes moved to the salt tray. Using a pencil crayon she made three straight lines in the salt. When she heard her name on the tape Mary looked at the group at Table One but immediately turned back to the salt where she put her hands flat into the tray to make imprints. She shook the tray and made a dot design by poking with one finger.

#### Communication Event #3

Mary ran to join the group at the tape recorder. As the teacher stopped talking Mary began to talk about her bag. Right foot wobbling she said, "Me'n Jimmy like to sew." However Mrs. Brown moved away and Mary walked, eyes down, and looked into the fire station. She closed the door of the fire station, leaned her head far to the right and moved over to the sand tub. Right knee slightly bent, she stood and dug with a small shovel.

#### Communication Event #4

Mrs. Brown was demonstrating paper cutting at Table One. Mary looked up from her digging as two boys entered. "Hi little Davey," she called, and went to meet them. She leaned close to David and spoke to him, then jumped up and



down smiling. She put her feet on the rung of a table and then climbed up on it. One foot returned to the rung. She looked at the observer, moved backward and forward, heard the door open and ran to greet Marilyn. Mary disappeared into the cloakroom with Marilyn.

#### Communication Event #5

When Judy came in Mary came out of the cloakroom to greet her. Mary looked toward the post office, then at Judy as they talked. The two girls went into the cloakroom together where they spent two minutes talking while Judy took off her coat. Mary came out with Judy. She was still carrying her bag. Mary watched intently as the teacher showed much interest in a scrap book and doll that Judy had brought. The teacher invited Judy to show them to the class. Judy went toward the teacher's desk. Mary followed. While Judy showed her treasures, Mary fingered Marilyn's hair, pushed at it and pulled her lower lip under her upper lip. Moving closer to Judy she fingered the feathers on Judy's doll.

As soon as Judy finished speaking, Mary pointed to the puppet house and said, "I wanna go to..." but Judy moved toward the teacher. Mary followed, bag in hand. The teacher noticed her bag and said, "Oh is that something you want to show. Put it her for now." Mary nodded, glanced at Judy and together they ran to get some puppets. They disappeared into the puppet house. Much giggling came from the house as it wobbled about.

Communication Event #6

Six minutes later the door of the puppet house opened and Mary came out carrying a puppet. Judy and Marilyn followed. Mary went to Table Three, leaned on it and rubbed her knee. Her eyes followed Marilyn and Judy as they disappeared into the crawl box. She went to Table One, where she looked at the teacher, sucked the puppet and gazed at the record player table. She walked over, looked at Raymond and put the puppet on the shelf. Suddenly Mary ran to Table Three, talked to Lynne and picked up some pieces of the puzzle Lynne was doing. Lynne slapped Mary and left the table. Mary called, "Lynne!" and stood looking at her. The pieces of the puzzle were still in her hand.

Communication Event #7

Mary turned to look at the boys who were "curling." She appeared to be talking to herself. She picked up the puzzle tray and took it to the fire station table, left it there and went to Table Three.

Communication Event #8

Mary leaned on Table Three and looked across the room at the post office where Judy was playing with several children. She ran to the post office and peered through the wicket. Judy said, "Mary," and Mary leaned on the post office table and frowned as she said, "Hey you guys." She walked to the side of the post office and said, "You guys are not supposed to do that." Mary stood staring at Marilyn

and Judy who turned and left. Mary began to speak, "But, but..." They ignored her.

#### Communication Event #9

Mary stood alone, then leaned on the teacher's desk. She wandered to Table Three where she picked up a pencil and drew a line in the salt. She dropped the pencil and picked up a pinch of salt between two fingers. She tasted it. Leaning on the table, she looked at the teacher who was at the paper cutting table. She ran over, spoke to the aide, picked up a spiral that the teacher had cut, dropped it and moved to the tack board where various paper cuttings hung. She fingered them, then took one and went back to the table.

#### Communication Event #10

Mary stood with the paper cutting in one hand and looked at the group across from her. Karen shouted "Mrs. Brown!" Mary put her head to one side, looked at Karen and said, "Karen don't shout!" Her lips protruded as Marie, the aide, talked to her. Mary took a piece of paper and with mouth drawn tightly, folded it, backward and forward. She picked it up and fingered it. Looking up as Marie spoke and opened the folded fan, Mary smiled. Marie told her to staple the fan at the bottom. Mary obeyed. Mouth open, she looked at the results and smiled slightly. Then waving the fan close to David's face, her smile broadened as she said, "See David!" She went back to the end of the table.

Communication Event #11

Mary called Marie and with a pencil in her mouth waited for the aide to come. Mary traced a circle and cut it out. As she cut, her mouth twisted to one side as if it were following the scissors. She continued to cut but glanced up frequently and sometimes cut focussing on another child instead of on the paper. As the teacher talked to the boys in the "curling area", Mary watched. She then began to cut her circle into a spiral. As she worked her mouth opened, her jaw protruded and her lower lip sagged. As she finished cutting, she showed her work to Marie then went to the tack board and called Marie. Looking at the aide she pointed at another cutting. Mary then went back to the table showed her spiral to the teacher and said, "There's Sammy Snake and a fan." The teacher said, "That's nice." Mary smiled.

Communication Event #13

Mary's eyes wandered to the sand tub. She went over and began to sift sand but after a few seconds left the sifter and joined Marie who was fixing the stapler at Table One. Marie offered her the stapler. Mary poked at the display board, and went back to the table where Mrs. Brown was showing some of the cut paper work that the children had done. Mary looked at the group. Her chin protruded and she put her left foot over her right, frowned and picked at her fingers. She tapped the table with her fan, dropped the fan, picked it up, swung her left leg back and forth, and looked

at the boys who were curling.

Communication Event #14

Mary ran to the "curling rink," slid into the side of the block fence, got up, climbed over and said, "Judy, get off of the curling rink." Mary left the rink and went to the housekeeping corner. Judy followed. Mary turned and said, "Judy can't play here." But Marie came and spoke to Mary and Mary followed her back to the paper cutting.

Communication Event #15

Marie told Mary to make a picture frame. Mary smiled and stood, while Marie did the work. Mary tried once to take it from Marie, but Marie finished it while Mary puckered her mouth and frowned. When it was finished the aide said, "Show Mrs. Brown!" Mary showed the picture frame to the teacher and they talked about it. The teacher asked, "Did you make it or did Marie?" Mary replied, "She did." and walked with Mrs. Brown toward the teacher's desk. Mrs. Brown said, "Could you put a picture in it?" Mary went back to Table One saying, "I know what picture."

Communication Event #16

Back at Table One Mary stood beside Marie and watched Dan and the teacher. She opened her mouth, shut it, and scratched the back of her head. She put one finger in her nose, then the same finger into her mouth and looked at Marie. She continued with the same kinds of movements as she watched Marie doing some cutting. Mary finally yawned, scratched her

nose and put her finger in her mouth as Marie finished cutting a pinwheel. She held it down on the table and told Mary to staple it. Mary tried but the points of the pinwheels slipped out. Mary's mouth protruded as she tried again. She looked at the teacher, pushed the stapler and looked at the pinwheel which was still not fastened. Mary put her finger into her mouth and said, "I can't do it." Marie came over and while she fixed the pinwheel Mary put her left foot onto her right foot, let her eyes wander, and ignored Marie.

#### Communication Event #17

Mary went to the tackboard and pointed at a Japanese lantern. Marie followed her and they returned to Table One talking together.

Marilyn showed her where to cut to make a lantern. Mary watched carefully. She picked up the paper, looked at it, frowned and with her mouth open began to cut. She leaned over the table and scowled at Karen. "Use the stapler," she said. Mary went back to cutting. As she worked she looked from one person to another.

#### Summary of Observation #3

This observation which was 62 minutes in length yielded 337 nonverbal cues, approximately 5.4 per minute. There were 17 communication events. Table 7 indicates the situations and the quantitative and qualitative analysis of Observation #3.

An examination of Table 7 reveals that Events #1 to

TABLE 7

ANALYSIS OF OBSERVATION #3 MARY

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
1. Arrival moving about.	1	7	1	9	1	20	4	43	29	14	36	7	32	11	1	0
2. Printing & salt play.	1	2	1	6	0	11	2	23	19	4	18	5	19	4	1	2
3. Salt and sand play.	0	0	0	10	0	7	0	17	9	8	11	6	17	0	0	2
4. Greeting others.	0	1	1	5	1	5	1	14	10	4	9	5	6	8	1	1
5. Judy arrives puppet house play.	1	11	1	0	0	7	6	26	23	3	23	3	8	18	1	1
6. Puppet house seeking activity.	0	2	1	7	0	8	3	21	15	6	14	7	18	3	0	1
7. Self directed varied.	0	0	1	0	0	5	0	6	4	2	3	3	5	1	0	0
8. Seeking acceptance at post office.	0	0	0	1	0	5	2	8	7	1	8	0	8	0	0	3

TABLE 7 (Con't.)

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
9. Salt play directed paper cutting.	0	0	0	2	0	14	1	17	16	1	17	0	16	1	0	1
10. Paper cutting with Marie.	4	1	1	5	0	7	3	21	5	16	21	0	14	7	1	2
11. Paper cutting (continued)	5	3	0	9	0	10	0	27	19	8	23	4	19	8	2	2
12. Paper cutting (continued)	5	0	0	1	2	6	4	18	12	6	14	4	9	9	1	0
13. Sand and paper cutting.	3	2	1	10	0	13	2	31	20	11	17	14	24	7	1	0
14. Interaction with Judy.	1	1	0	0	0	1	1	4	4	0	4	0	1	3	2	0
15. Paper cutting resumed.	3	0	0	2	0	2	0	7	5	2	7	0	4	3	3	0
16. Paper cutting (continued)	2	3	0	17	0	7	5	34	16	18	14	20	27	7	3	0
17. Completing Paper cutting.	2	5	0	6	0	6	1	20	17	3	14	6	12	8	2	0
TOTALS	28	38	8	90	4	134	35	337	230	107	254	84	239	98	19	15



TABLE 7 (Con't.)

Key				
C-T	-	Child-teacher interaction	S	-
C-C	-	Child-child interaction	N.S	-
C-G	-	Child-group interaction	Att.	-
C-S	-	Child-self interaction	I.Att	-
C-O	-	Child-observer interaction	Intr.	-
C-S-E	-	Child-self-environment interaction	Inter	-
Com	-	Combinations of above categories	R	-
T	-	Totals	QE	-

Symbolic Cue

Non-symbolic Cue

Attentive Cue

Inattentive Cue

Intrapersonal Cue

Interpersonal Cue

Responsive Cue

Qualifying expression

#9 inclusive were self-initiated and self directed. The remainder with the exception of Event #14 were partially self initiated. That is Mary chose what to cut from a number of teacher suggested patterns. However the aide directed the activities which Mary had chosen. Interactions with the aide were included in the child-teacher category. Event #14 was self-initiated and self directed. Hence the apparent increase in child-teacher interaction is perhaps due to the 25 child-teacher interactions involving the aide most of which were aide-initiated and almost aide-dominated. The rise in this observation of child-child interactions when compared with Observation #2 may be due to nine of the events occurring during self-selection time.

With 224 or 337 cues or 67%, categorized as child-self and child-self-environment, it is evident that much of Mary's nonverbal communication is interaction with her "self".

Qualitatively Mary's nonverbal communication was again highly symbolic but more attentive than in Observation #2. Her interaction continued to be largely intrapersonal. Mary used the nonverbal mode as a response 19 times and to qualify a verbal expression 15 times.

Observation #4, March 1, 1972; 10:38 - 11:27 a.m.Communication Event #1

Mary was standing at Table Three watching Karen, who was singing a German song to the class. Mary blinked, blinked again, put her elbow on the back of a chair, pulled on the toes of one foot, and turned to watch when the teacher moved to mark the calendar. She flapped her hands on her lap, pushed on Table Three with both hands and glanced at the teacher and the group. With toes on the floor and heels up, Mary moved to the group at the end of the table.

Mary sat at Table Three when the snack was served. She drank her juice and stuffed a large lump of bread into her mouth. (This bread had been spread with butter and jam during a directed activity carried out by a student teacher.) Mary fingered her cup and shoved the dish with the bread on it toward the aide, saying, "I can't eat it!"

One of the boys jingled a set of sleigh bells that he had brought to show. Mary looked at him, then gathered the cups from her table, and thumped them loudly on the table. When Mrs. Brown said, "Mary!" Mary looked at the teacher and deposited the cups in the garbage.

Communication Event #2

The children were seated in their semi-circle ready for story time. The teacher was discussing a planned field trip. Mary fingered her fingers, pulled her lips with her fingers, put her hands on her lap, pulled her lips again and

returned her hands to her knees.

When the teacher asked how many mothers were going along Mary shoved her right hand up and said, "Me, me, me!" The teacher asked, "Is your mother going, Mary?" Mary nodded. She looked at the teacher, then at the group, put her finger in her mouth and turned toward Marie. The teacher reprimanded the children for "all talking at once." Mary rubbed her eyes, glanced at the student teacher, put her hands on her shoes, leaned on Billy and looked at the teacher who asked the children to get ready for the story.

### Communication Event #3

As the class prepared for story time Mary blinked, put her finger into her nose, then onto her tongue and leaned on her hands looked toward the door. She pushed Billy from the back, folded her arms, stiffened her body and looking at Judy she spoke to her.

Head to one side, she put her finger into her nose again, rubbed Karen's hair, looked at the aide, blinked, looked at Raymond and leaned back. She wobbled her body sideways, lay down on her elbow, got up on her knees, wobbled her head and fingered her fingers. Sliding forward on her knees she shook her head, put her hands over her eyes, pulled her nose, crawled away on her knees and sitting at the back of the group put her arms around David.

David backed away. When he turned and came toward Mary she took both of his hands in hers and he pulled her back to the group. She played with the ring on the zipper

of David's sweater, and finally looked at the book that the teacher was holding. It was entitled, Fish from Japan.

Communication Event #4

The story began. Mary knelt eyes on the book. She rose higher and began to finger Betty's barrettes. Still on her knees, she pulled on Hanna's hair. Mary then looked down at her own belt, pulled first on one foot, then on the other and changed from a kneeling position to a sitting position as she undid the magnetic buckle on her belt. She looked at it and clicked it open, then shut. Mary's eyes returned to the book and she again knelt and leaned forward, hands on her knees. She leaned backward and blinked three times within seconds but her focus was still on the book. Still looking at the book she put her head to one side, blinked, pulled Hanna's hair again, stroked it, moved over and sat legs extended.

Mary felt her shoe, blinked, opened her mouth, and blinked again. This kind of behaviour continued until the conclusion of the story.

As the teacher asked some questions, Mary stood up, sat down, scratched one eye, frowned, leaned her head to the right, looked at the book, blinked, put her hands on her lap and popped out her tongue. She looked from the book to the teacher, fingered some paper on the floor, and, with her mouth still open blinked. The discussion ended.

Communication Event #5

As the teacher read the story, The Transparent Fish, Mary's eyes moved from one place to another. She looked from the observer to a student teacher sitting at the back of the room, back at the observer and then to the other student teacher at Table One. Turning to David she fingered the zipper on his T-Shirt, pulled on the ring and put her finger through it. Her eyes returned to the book, then to the zipper and after looking at Karen, Mary looked back at the ring on David's zipper. She blinked twice, looked at the picture in the book and squinted. Then with head down Mary rubbed her eyes.

Communication Event #6

As the teacher read that the fish opened and shut their mouths, Mary held up her right hand and opened and shut it. The teacher suggested that the children make, "fish mouths." Mary formed her lips into an oval and fingered them to feel them opening and closing.

The story continued and Mary eyed the aide. Mary focussed on the book, blinked twice and stroked Hanna's hair. She looked at it intently as the sun shone on it. Eyes back on the book, she put her thumb into her mouth with her fingers on her teeth. Mary closed her mouth and her eyes moved to Karen. The story concluded.

Communication Event #7

The student teacher asked the children to make a

circle. Mary stood tongue out and joined hands with David. Suddenly she dropped David's hand and said, "I want Judy." She tried to break in beside Judy, who said, "I don't like you." The student teacher invited Mary to stand beside her. Mary looked up at her as the student began to teach the children a song about "The Sleeping Beauty." As the song continued, Mary's eyes moved to focus on Judy.

#### Communication Event #8

Mary scratched her legs as the song ended. The student moved to the front of the group to discuss the story. Mary put her finger into her mouth, felt her shoes, popped out her tongue, licked her lips, moved them from side to side, looked at the observer, then at the student teacher and finally at Mrs. Brown who was sitting at Table Two. She eyed Judy when Judy interrupted the story, then watched and frowned as Mrs. Brown pulled a little boy who was crowding back to the edge of the circle.

#### Communication Event #9

As the student teacher began to show the children how to add actions to the song, Mary watched her demonstrate. When it came to "sleeping" the student put her head to one side on her hands and closed her eyes. Mary's eyes stayed open as she watched. The student waved her torso in the breeze as if she were a tree. Mary frowned but made no move to imitate the action. As the children galloped as princes, Mary took one leap into the air and then fingered her fingers.

At the end of the song when "they lived happily ever after," Mary joined in the clapping and looked at the observer.

The student teacher then said she would choose children for individual parts. Mary pushed into the centre and said, "Me, me, me!" The teacher turned herself about, eyes shut and with her arm outstretched pointed at a boy. Mary's mouth protruded, and she stood feet astride and hands on her hips as she said, "A boy can't be a fairy!"

At the end of the first song, it was time to choose a new cast. Mary bounced into the centre of the circle, and pointing at herself said, "Me, me." She looked at the children, then peeked into the costume bag, and went back to her place in the circle. Mary blinked and fingered her fingers, then shot up her hand when the teacher asked how many could remember the song. Mary was not chosen. As the song progressed she moved very slightly and did not sing. When the trees waved she was motionless. As the galloping began she slapped her knees, looked at the observer and joined in the clapping at the end.

When it was once again time to choose a new cast Mary looked at the student teacher, put her finger in her mouth, pushed into the circle, shoving David and Betty aside as she did so, and then stood right in front of the student teacher with arms folded and smiled as the prince was chosen. However when she was not picked she ran to the other side of the teacher and squeezed into the circle.



Communication Event #10

As the teacher began the song again Mary leaned forward. She put her head on her hands to "sleep" but her eyes remained open as she smiled. She raised her hands to become a tree, slapped her knees for the galloping and joined in the singing as she looked at the children who were doing the acting.

Communication Event #11

Mary was finally chosen to be the princess. She smiled, wobbled her head and put on the crown. It slipped down over her eyes. She pushed it up and blinked. The other children laughed. Mary took it off and handing it to Judy said, "Here Judy you can be it!" As the song proceeded Mary kept her eyes open and her finger in her mouth until the end when she smiled and clapped.

Communication Event #12

When the student teacher decided that they would sing the song again, Mary backed out of the circle and ran to the storage area where she stayed while the student teacher was attempting to regain rapport with the group. After Mrs. Brown intervened and order was restored Mary came back to join in the song. "If You're Happy and You Know It." Mary, stamping her feet, wiggled all over, jumped up and down and looked at the student teacher. When she noticed that Judy was holding hands and talking with the student teacher, Mary frowned but went on with the song until its conclusion.

Communication Event #13

Mary ignored Mrs. Brown's request that they all sit down for showing time. Instead she followed Betty to the storage room. Betty returned with a toque in her hand. Mary was skipping along behind. She waved her arms, sat down, and then got up and ran to the record player. The teacher called, "Mary." Returning to the group, Mary squeezed into the front row. Betty put the hat on her head, giggled and said, "Know what, it's not a hat, it's a tea cosy." Mary eyed Betty, frowned, blinked, put her lower lip under her upper lip, and leaned back with her hands in her lap. Still watching Betty she blinked, smiled and leaned forward. When the teacher said, "Now Judy has a song," Mary looked toward the door, knelt with her hands on her knees, turned around and began to talk to Karen.

Summary of Observation #4 Mary

This observation which was 49 minutes in length yielded 309 of Mary's observed and recorded nonverbal cues or approximately six cues per minute. There were 13 communication events. Table 8 indicates the situations and the qualitative and quantitative analysis of Mary's nonverbal behaviour during these events.

All of the events of this observation occurred during teacher initiated activities. Table 8 reveals that Mary's involvement with other children individually and in groups exceeds her interaction with the teacher. "Teacher" in this observation includes the aide and the visiting student

TABLE 8

ANALYSIS OF OBSERVATION #4 MARY

Event Situation	Quantitative Analysis										Qualitative Analysis						
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE	
1. Snack time.	2	1	1	6	0	10	3	23	16	7	14	9	10	13	3	0	
2. Planning field trip.	3	2	1	8	0	0	0	14	5	9	2	12	8	6	3	0	
3. Sharing time.	1	9	4	29	0	1	4	48	30	18	24	24	34	14	0	0	
4. Story time.	1	2	0	56	0	7	2	68	40	28	68	0	65	3	2	0	
5. Discussion during story.	0	3	0	6	2	4	3	18	12	6	6	12	12	6	0	0	
6. Story (con't.)	1	3	0	13	0	2	1	20	12	8	13	7	15	5	2	0	
7. Preparation for action songs.	3	1	0	11	1	0	1	17	12	5	6	11	11	6	1	0	
8. Action song.	2	2	0	2	0	0	0	6	4	2	6	0	2	4	2	0	
9. Action song.	7	1	2	19	1	1	1	32	29	3	25	7	21	11	10	0	
10. Action song repeated.	2	1	1	7	0	0	0	11	11	0	11	0	7	4	0	0	
11. Action song repeated.	0	2	0	15	0	1	0	18	14	4	17	1	16	2	2	0	

TABLE 8 (Con't.)

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
12. Action songs (continued)	0	0	2	10	0	0	0	12	12	0	9	3	10	2	3	0
13. Action songs (concluded).	0	4	0	13	0	4	1	22	12	10	17	5	17	5	1	0
TOTALS	22	31	11	195	4	30	16	309	209	100	218	91	228	81	29	0

Key

C-T	-	Child-teacher interaction	S	-	Symbolic Cue
C-C	-	Child-child interaction	N.S	-	Non-symbolic Cue
C-G	-	Child-group interaction	Att.	-	Attentive Cue
C-S	-	Child-self interaction	I.Att	-	Inattentive Cue
C-O	-	Child-observer interaction	Intr	-	Intrapersonal Cue
C-S-E	-	Child-self-environment interaction	Inter	-	Interpersonal Cue
Com	-	Combinations of above categories	R	-	Responsive Cue
T	-	Totals	QE	-	Qualifying expression

teachers. There were two of the latter and each had worked in one activity during the morning. While Mary's interaction with children exceeds that with the adults, it must be noted that her interaction with herself far exceeds the total of her child-teacher, child-child, child-group and child-observer nonverbal interactions.

Qualitatively Mary's nonverbal communication during this observation appears to be about two thirds deliberate and one third unconscious (nonsymbolic) while her attentive behaviour and inattentive behaviour is also about two thirds to one third, respectively. Her intrapersonal nonverbal cues occur almost three times as often as her interpersonal nonverbal cues.

Mary used the nonverbal mode 29 times in this observation as a means of responding to another person. It must be noted that three of these responses were negative. There was no qualifying of expression through the use of the nonverbal mode. The observer appears to have been successful in remaining as inconspicuous as possible for Mary had only related to her four times and all of these were merely glances.

### Mary: Conclusions

The quantity of Mary's nonverbal communication in an educational setting appears to be significant. In 216 minutes she emitted 1,288 nonverbal cues giving a mean emission of 5.9 per minute. Her nonverbal communication according to analysis of Tables 5 through 8 is most often involved with herself. There are 909 intrapersonal nonverbal emissions and 379 interpersonal nonverbal cues.

An examination of the tables reveals that the situation appears to affect the amount and quality of nonverbal interaction that takes place. Observations #2 and #4 were largely teacher-initiated and teacher-directed, while Observations #1 and #3 were child-directed, self-selected activities. The teacher directed hours yielded predominance of child-self interactions while there was little variation in the number of child-self-environment cues emitted with the exception of Observation #4. It might be assumed that when the teacher is directing a lesson Mary finds little opportunity to interact with other children or objects in the environment, hence the high frequency of child-self emissions. The drop in interaction with the environment in Observation #4 is probably due to the fact that this observation was largely of teacher directed action songs. Mary could not come into contact with her environment while holding hands in a circle. It is interesting to note that during the self directed periods Mary's interaction with her self decreased. This

could be accounted for by the fact that there was more opportunity to interact with her environment and other children.

Mary's nonverbal communication appears to be highly symbolic in all situations but she is more attentive to tasks during the self directed periods (Observations #1 and #3). Observation #4 is again an exception as the action song situation was highly structured and therefore attention was forced rather than related to interest in the task.

The predominance of intrapersonal nonverbal emissions indicates that Mary's nonverbal communication is probably related to her inner feelings and therefore her affective domain.

Mary's mother drew attention to Mary's "fleeting interests." The teacher concurs when she mentions that Mary leaves an activity if she is at all frustrated by it. The observations bear out Mary's inattentiveness as she has a total of 59 communication events in 216 minutes or a mean length of attention to a task of approximately 4 minutes.

While Mary's mother viewed her spending much time alone as a sign that she was happy alone, Mrs. Brown views Mary as a child that needs and wants other children. The observations seem to indicate that Mary is most anxious to be accepted by children in group and individual situations. For example, she seems to strive to be part of Judy's activities and although her mother felt that she was not upset by Judy it appears from the observations that she is often

hurt by Judy or that she would like to be close to Judy so that she will be part of the activities. Mary even gave up her opportunity to be the princess to give her turn to Judy in what appeared to be an attempt to win Judy's favor after having suffered rejection by her.

Neither Mary's mother nor Mrs. Brown saw Mary as a child that seeks attention. However the observations point up an incongruency, for when she could not get the teacher's attention she turned to the aide (Observation #3) and monopolized her. Furthermore, Mary appears to be seeking acceptance from the children, especially from Judy.

Mary was labeled a follower by her teacher and a co-operator by her mother. The observations appear to be congruent with this perception. Mary, however, seems to have the potential and desire to initiate. For example her activities with the syphon seemed to be her way of contributing to the activity in a playful yet original way.

While both Mrs. Brown and Mary's mother see her as happy but not exuberant, the observations reveal that when she receives attention she can be very enthusiastic, for example, jumping into the air when asked to water the plants.

Mrs. Brown stated that Mary doesn't spend much time alone while her mother said she spent hours alone. The observation seemed to indicate that Mary may spend some time alone but spends more time attempting to be accepted, seeking identity with a group and trying to remain aware of where Judy is and what Judy is doing.



Mary's mother related Mary's early fears of being abandoned and Mrs. Brown mentioned her worry about her sister leaving her. Thus while her mother feels that she is growing more secure, her teacher perceives that she still fears being left behind.

Neither Mary's mother nor her teacher had noticed any nonverbal habits other than hurt looks in her eyes. However the observations reveal such repeated behaviours as blinking, frowning, mouth protruding and a great deal of body movement.

Although her teacher and her mother see her as nonaggressive, Mary revealed that she can assert herself by pushing or wiggling into the position she deems desirable to get attention.

Mary's mother and her teacher both call her "an easy child to handle", yet in her quiet way Mary has revealed in these observations that she seems to be constantly watching, waiting and manipulating situations.

## CHAPTER 7

### BETTY

#### Betty at Home

Betty was born in January, 1967. Her mother is a teacher of the preschool deaf and her father is a lawyer. A planned addition to the family, Betty has an older sister, an older brother and a younger brother.

Betty's birth was normal and rapid. Her medical needs have been provided by the South Side Medical Clinic. Betty was a breast and bottle baby who had no feeding problems. Once she learned to feed herself she did not revert to wanting her mother to feed her. As a toddler when she disliked a food, she screwed up her face and ate very slowly. Her favorite food now is chicken. She enjoys taking part in family discussions at meals, but sometimes has difficulty getting a turn. "She will then tell us all to be quiet and that we shouldn't all speak at once." Betty enjoys company for dinner and tends to show off, but not in unpleasant ways.

Betty was quite small at birth and so it took some time before she could sleep through the night. She went through a period during toddlerhood when she had nightmares and would climb into bed with her parents, but this has passed. She has always had a crowd of soft animals that she likes to take to bed with her. At present two of these are her favorites. One is an old bear that she was given when she

was in England last summer. It had been her mother's favorite toy when she was a child. Betty now takes it to bed every night and says that she is going to give it to her children. She is very concerned about keeping it in good condition to pass on.

A cuddly baby, Betty has always been a friendly child although she has gone through a period of shyness. She had no playmates during her toddlerhood.

Betty seemed to be aware of herself as a separate entity at an early age. Her mother recounts that she drew a human figure with all the parts when she was "exceptionally young". Her mother described the situation:

It may have been because we were doing it in the family. I was taking a course at the university and I had one of those I.Q. tests of body awareness and her I.Q. was just phenomenal. I am sure it is not in the realm of what came out on that test, but she was about three when she could draw a figure. Now whether she was conscious of herself or whether it was because the figure form was taught, I couldn't say.

Mobility came slowly to Betty. She was not active in her early months and was slow to creep. She did not walk until she was fifteen months old. Her mother feels this may have been because her siblings and parents anticipated her every need and provided for them.

Betty was easily toilet trained and always let her mother know when she needed to be changed. To get attention, she screamed loudly. At five she still uses this method and in addition will cry, jump up and down and pout. Sometimes she reverts to babytalk.

Betty has never had any fear of needles or of visiting

the medical clinic. Her mother credits the clinic staff with helping to develop a positive attitude toward routine checks. Visiting the dentist, however, did bring about a trauma.

Her mother states:

We did have trouble with the dentist. She nearly fainted. She turned completely white because my eldest daughter came out into the waiting room with blood streaming from her mouth. She had had a tooth out but Betty was going for a checkup. Betty went clammy. The dentist wanted her to go in. I said "No," because I thought she was going to faint. I had never seen her like that before and I said, "No, I don't want her to go in now. I think some other day." He gave me a severe lecture on "giving in to children". I have not seen that dentist since. She was very, very frightened. We left a good long gap before we went near a dentist. Then we went to another one, explained the situation, and she was fine.

Betty is prone to earache when she gets colds. One such occasion resulted in taking her to the emergency ward. She was very miserable enroute but at the hospital smiled and said "fine" when the doctor asked her how she was.

As an infant Betty accompanied her mother to work at the class for the preschool hard of hearing. During her crawling period this was a three day a week event. At four she went to the Windsor Park Co-operative Nursery School three mornings a week and to the Ukrainian Nursery School at Saint Basil's Church the other two mornings. She still attends the latter four afternoons a week and her kindergarten five mornings. Betty is proud of being able to speak Ukrainian and perform the Ukrainian dances. She brings work home from the morning kindergarten in a triumphant fashion. Her mother feels that she is quite creative and very verbal.

Betty appears to accept new situations readily. She

was excited and interested when the family went to Europe in 1971. She got lost in Paris and was very upset, but it was not a lasting fear. She has recently shown some emotion when it is necessary to get a new babysitter, but she accepts the situation with comfort from her sister.

Betty is an outgoing child who will play alone but shows boredom if she is alone. Betty's mother says that she has always played with older children and so has not become an initiator. Instead she often does what her best friend, an older girl, tells her. Betty seems to enjoy one friend at a time and once she begins a task stays with it until it is completed. Described by her mother as a "reasonably cautious but not wildly venturesome child" she accepts changes well. Her mother reports that:

Our youngest child is adopted. We got him in September. She reacted well to him. He was one and a half so it was not an easy adjustment, but she managed it well. ...She now shows physical affection for her new brother by cuddling him and behaving in a motherly fashion toward him.

With adults she likes to climb up and be cuddled. However, at present she is having some difficulty with her older siblings. Her mother describes the situation:

She is going through a period of intense persecution. They are impatient with her and give her quite a bad time. I spend the whole time trying to protect her. I don't know whether I make it worse or not. It's very difficult. They are quite mean to her.

Betty at SchoolThe Teacher's View

Mrs. Brown calls Betty a "happy little extrovert who is secure in most situations." Quite independent in school, Betty does not seem to need tactile reassurance but likes it for she "sidles up a lot". Mrs. Brown sees Betty pouting at times and lapsing into babytalk which the teacher feels may be a way of seeking attention.

Her preference appears to be parallel play. Her kindergarten teacher tells of a recurring behaviour:

...I don't know whether she's trying to get away from a situation which is unpleasant to her, whether it's the noise, or if it's just that she's young, but she will go and lie down on the carpet or under a table. Many a time I've caught her just all by herself lying under a table, quite happy, maybe even singing to herself.

According to her teacher, Betty relates well to all people and "takes over any adult that comes into the kindergarten." She is usually very happy with her school work and her teacher considers her creative, responsive and attentive. A very sociable child Betty "doesn't really need people, but likes them."

Mrs. Brown views Betty as more verbal than nonverbal in showing her feelings, but states that one aspect of kindergarten life that seems to frustrate her is the noise level. When it reaches a certain peak, Betty sometimes goes to the teacher and says, "I've got a headache. I can't stand all this noise."

What Betty Does at Kindergarten:Her Nonverbal CommunicationObservation #1, March 6, 1972, 9:17 - 10:17 a.m.Communication Event #1

Betty was at the salt trays at Table Two. She took the salt in both hands and dribbled it through her fingers watching it intently. Her eye focused on Daniel opposite her. She spoke to him, and then to the group at the next table who were using the tape recorder. She looked at the observer, took a handful of salt and said, "See that! It's a handful of salt." Dan looked at Betty and said, "I know everything! What's eight and eight?" Betty replied, "Eight and eight... sixteen." She put her hand tightly onto her chest, drew her mouth tight, looked at Daniel and said, "What's two and two?" He replied, "Four," and went on doubling numbers from two to sixteen. He asked, "What's sixteen and sixteen?" Betty shook her head, fingered the top of her head, clasped her hands and said, "Eight and eight is six." Daniel laughed and argued with her. Betty became quiet. She fingered the sand, picked some up and sifted it through her fingers. She pushed it into a heap as her eyes wandered to the tape recorder group.

Her head leaned to the right and she opened her mouth as her eyes moved back to the salt. She tasted it, spit some into her hand, rubbed her hands together and then rubbed the salt onto her clothes. To get it off her clothes she

jumped up and down and shook herself. Betty then went around the table and joined Chris at the small salt tray. She spoke to him but he did not reply. Betty's mouth protruded and she moved back to the large salt tray.

### Communication Event #2

Betty looked at her clothes. She went to the end of the table and picked up a pencil. As she returned she glanced at the group at the tape recorder. Her mouth protruded, then closed.

Betty took some paper and began to draw. Her brows raised as she looked at the felt pens. Mouth protruding she looked toward the tape recorder. Betty bent close to her paper and drew a large rabbit. As she worked, her lips protruded. She held the paper with her left hand. When she had finished she held the picture up to show the observer. She said, "He has seven feet, one, two, three, four, five, six, seven." Then she said to herself, "Make it eight!" and she drew another foot.

Betty dropped the pencil and went to the fire station table where she stood on tiptoes and reached for a fishing rod.

### Communication Event #3

Chris and Betty began to drop a magnetized fish line into a box to catch paper fish that had small magnets on their noses. When Chris put the line in, Betty reached into the box and attached a fish. She blinked and her eyes got



round as she waited for him to pull it out. She took it off the hook for him and then stood on tiptoes to help him catch another fish.

It was Betty's turn to fish. She stood holding the line while Chris put a fish on. When he said, "Okay!" Betty pulled, swung the line around and while Chris tried to grab it she let it drop to the floor. There was no fish on it. Chris picked it up and put it into the box. "Try to get one now," he said. She caught fish number four, swung it round her head and smiled.

When Chris tried to put a fish on for her she said, "No!" She let the line dangle into the box, pulled it out, smiled and said, "No fish!"

Randy joined them. Betty then stood, wiggled the rod and allowed the boys to put a fish on it. However, Mrs. Brown came over and said, "Take it to Table Three and take turns." Betty took the box, put it on Table Three and climbed up beside it.

#### Communication Event #4

Betty sat on the table with her feet on a chair. When the two boys began to argue about who would fish first, Betty slid down, stood back about two feet from the boys and stared at them. She loudly told them that they should take turns. Chris gave her the rod. She blinked. She stood still, closed her eyes and opened them as Chris impatiently grabbed the line and pulled out a fish. Betty climbed onto the table and smiled as she attached a fish for Chris to catch. Mrs.

Brown walked by and asked whether they were taking turns. Betty scratched her ear. Chris said, "Hey Randy, it's your turn," but Betty shook her head and said, "No, it's my turn!"

#### Communication Event #5

The teacher brought a touch box to Table Three. After she had introduced it to the group Betty reached in, looked in and then went to the tape recorder. There she sat down opposite Frank. She put her elbows on the table and with two fingers in her mouth, watched dreamily. She felt her teeth, got off the chair, came to the observer and said, "I wonder why I've got two pointed teeth." She put her fingers on her eye teeth.

#### Communication Event #6

Betty went back to the tape recorder and knelt on a chair. She put her elbows on the table and cupped her chin in her hands. She fingered the recorder and said to Frank, "We want more room so we can talk."

Betty picked up the microphone and smiled at the observer. She handed it to Frank who spoke into it and gave it back to Betty. Betty told him that he recorded too loudly. Head in her hands, she watched the reel move for a playback. Mary came over and spoke to them. Betty said, "Sh, the men are talking now." Her mouth protruded, as Mary began to manipulate the recorder. Betty got down from the chair stood and lips protruding said in a whiny tone, "We wanna talk!" She watched Mary as she got back on the chair and

and reached for the microphone.

Just then a child at Table One spilled some paint. The paint jar fell to the floor and broke. Betty looked at the teacher. Her eyes grew wide and her head bobbed. She went to Table One, looked at the paint on the floor, ran to the teacher and said, "Look, Mrs. Brown." She followed the teacher to the mess, watched as the paint was being cleaned up and said several times, "I wanna paint, I wanna paint." Betty, then skipped to the storage room.

#### Communication Event #7

Betty came out swinging a painting smock. She pulled the smock over her head, got it tangled but went to the painting table. She looked at some children who were painting, walked around the table and stood watching Karen who was wiping the paint from the floor. Her eyes moved around as she said, "I don't have any place to paint." Her mouth protruded, her hands went into her apron pocket and her eyes focused on the teacher who was helping Karen. Betty smiled and said, "You two are doing a good job." She looked again at the teacher, scowled, flapped her hands and said, "I don't have any place to paint!" The teacher fixed some paper on an easel and gave her a brush.

#### Communication Event #8

Betty dipped the brush into some water, stroked the paper and her eyes widened as no mark appeared. She rubbed the brush on her smock, looked at the teacher and dipped

into the red paint. She began to dab splotches of red on the paper. She made a row of splotches across the paper and her eyes followed the row. Betty frequently opened and closed her mouth and put her head from one side to the other as the brush moved. She glanced at the teacher and the other children as she continued to paint.

Betty washed the red out of the brush, wiped the brush on the table, dipped into the green and made green dabs in long rows, working from left to right. She then painted a long green line under the dabs. Betty looked at the observer, and proceeded to make dabs of black. She watched as some paint ran down the page and with her brush she lengthened the streak. She then used yellow to make a large horizontal stroke. After filling the bottom of the sheet with yellow, Betty put her brush into the water can, and shrugged when Daniel asked, "What did you use to make orange?" He was referring to where Betty's yellow and red had overlapped.

Betty took her picture to Mrs. Brown who sent her back to put her name on it. She put her head to one side, and spelled and enunciated her name as she printed it. She then brought the picture to the observer, held it up and said, "I'm gonna take home a yucky painting." She smiled, put the picture on the table and rolled her hands up in her apron.

#### Communication Event #9

Betty went to Table Two, pulled a whistle from the touch box, blew it, smiled and returned to the tape recorder.

There she looked across at the teacher and said, "I wanna paint another picture." Mrs. Brown, who did not hear her, turned and left the area. Betty trotted along a few steps behind and said again, "I wanna paint another picture." Her eyes grew large as the teacher continued to move away from her. Betty went to Table Two where she watched a girl working at the salt tray. Mrs. Brown called her to paint. She put some paper on an easel for Betty.

#### Communication Event #10

Betty painted a green circle. Leaning her head to the side, she moved her brush around and around. She looked over to the woodwork area where some boys were hammering. Back at work she wiped her brush on her apron, wiped her hands on her apron, and dabbed yellow inside her green circle.

Leaning back Betty puckered her mouth and looked intently at her work. She then made two large orange strokes from the upper left corner of her green circle. Eyes on her work she carefully painted an orange circle around the green one. As she painted from left to right dabbing with the brush, her body also moved from left to right. Betty blinked and her chin protruded as she mixed some colors in a lid. Singing to herself, she painted on the table and then on her sheet. She poured paint first into a lid then onto the table. Dropping her brush, she folded the corner of the paper which was covering the table over the paint on the table. She opened the folded corner to look at the results. Betty then took her picture to a table, came back

to the painting table, heaved a sigh and joined Frank at the tape recorder.

Communication Event #11

Standing on her tiptoes, Betty reached for the microphone and said some nonsense syllables into it. She leaned forward to replay. Smiling as she heard her voice she put her hand on the back of her head, kicked up her heels, pulled off her smock and ran to the storage area.

Communication Event #12

Betty came back and spoke to the boys who were at the tape recorder. She went to Table One to talk to Hanna, then took Hanna by the hand and led her to the centre area. She left Hanna and went to speak to the teacher. Betty went to the pail in the corner where she washed her hands, jumped up and down, dried her hands on the back of her slacks and went back to the tape recorder. Raising herself to her toes she leaned forward and took the microphone. She spoke into it, "Karen come here. I kissed you right on the lips." She handed the microphone to Frank. When she heard the replay, Betty laughed, swung her legs and kicked up her heels, bracing herself with her hands on the table. Swinging her left foot back and forth she let it rest on her right foot. Finally she knelt on a chair, got down and swung her legs out sideways as she listened to the tape. Then she crawled under the table.

A moment later Betty came out to take the microphone

from Karen. Karen grabbed at it. Then passing it back and forth the two girls conversed about a giant. Betty recited the alphabet then sang it while swaying her entire body to the rhythm. The two girls then exchanged the microphone as they conversed about who was the biggest giant. Betty leaned on the table as the tape replayed. She smiled, twiddled her fingers, looked at the group as her voice came on, then crossed her legs, threw her head back and laughed.

The teacher announced clean up time.

#### Summary of Observation #1: Betty

This observation was 59 minutes in length and yielded 375 observed and recorded nonverbal cues; or approximately 6.4 per minute. There were twelve communication events.

Table 9 indicates the situations and quantitative and qualitative analysis of nonverbal cues emitted during this observation.

All situations in which Betty was involved were child-directed and selected. An examination of Table 9 reveals that Betty was highly self involved. A total of 304 of the 375 events were child-self or child-self-environment interactions. There was little variation in the amount of interaction with the teacher, an individual child, or a group and interaction with the observer was minimal.

Qualitatively Betty's nonverbal behaviour appears to be highly deliberate when her tasks are self chosen as she emitted 339 symbolic nonverbal cues and only 46 nonsymbolic nonverbal cues. Similarly she indicates that once she has

TABLE 9

ANALYSIS OF OBSERVATION #1: BETTY

Event Situation	Quantitative Analysis											Qualitative Analysis				
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
1. Self directed salt play	0	2	2	10	2	12	1	29	25	4	27	2	22	7	0	2
2. Drawing rabbit.	0	0	1	8	1	11	1	22	16	6	19	3	20	2	0	1
3. Fishing with Chris	0	0	0	7	0	15	5	27	25	2	27	0	21	6	1	2
4. Fishing (continued)	0	2	1	7	0	6	3	19	15	4	19	0	12	7	1	2
5. Touch box etc.	0	1	0	3	2	6	9	12	9	3	8	4	4	8	0	1
6. Tape recorder activities	4	4	0	7	1	13	1	30	28	2	25	5	23	7	5	5
7. Preparation for painting	1	0	1	4	0	7	4	17	16	1	16	1	12	5	0	3
8. Painting	4	1	2	22	2	42	6	79	70	9	78	1	68	11	0	4
9. Wandering	2	1	0	1	0	7	0	11	11	0	8	3	8	3	1	2
10. Painting	0	2	2	22	0	44	0	70	58	12	67	3	66	4	0	0



TABLE 9 (Con't.)

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
11. Tape recording	0	0	1	5	0	5	0	11	11	0	9	2	10	1	0	0
12. Taping (continued)	2	3	1	23	0	17	2	48	45	3	36	12	42	6	6	1
TOTALS	13	16	11	119	8	185	23	375	339	46	339	36	308	67	14	23

Key

C-T	-	Child-teacher interaction	S	-	Symbolic Cue
C-C	-	Child-child interaction	N.S	-	Non-symbolic Cue
C-G	-	Child-group interaction	Att	-	Attentive Cue
C-S	-	Child-self interaction	I.Att	-	Inattentive Cue
C-O	-	Child-observer interaction	Intr.	-	Intrapersonal Cue
C-S-E	-	Child-self-environment interaction	Inter	-	Interpersonal Cue
Com	-	Combinations of above categories	R	-	Responsive Cue
T	-	Totals	QE	-	Qualifying expression

chosen a task she attends to it. Her nonverbal behaviour appears in this observation to be related to her "self" as 308 of the 375 nonverbal cues were categorized as intrapersonal.

Observation #2, March 8, 1972, 10:26 - 11:26 a.m.

Communication Event #1

Betty was watching Raymond. It was his birthday and he was blowing and reblowing a relightable candle. Sitting at Table Two, eating a cup cake that Raymond's mother had provided, Betty watched intently. She then turned to eat some pudding which had been made during a cooking lesson earlier that day. Her eyes moved back to Raymond as she put her spoonful of pudding toward her mouth and missed. She regained her composure and licked the spoon. Banging it on the table she was again so intent on Raymond that she missed the cup as she attempted to get another spoonful. Finally she settled down to eat. Then she smiled, put her hands under her chin and with her spoon still in her mouth concentrated on Raymond. When she had eaten her lunch she turned and sat backwards on her chair with her legs between the seat and the back.

After putting her cup cake paper into her empty cup, Betty leaned toward the children at her table and said, "Seventeen girlfriends!" referring to the many attempts Raymond had made to blow out the candle. Her eyes widened as she got up and went to the centre of the room where she could see Raymond better. There she stood pulling on the legs of her trousers, eyes on the birthday boy.

Communication Event #2

Mrs. Brown reprimanded Betty with "Go to your chair,"

and Betty obeyed. She put both knees on the chair, slid her right leg down the back between the seat and the back and eyed the children at her table. Lower lip under her upper lip, Betty let her eyes wander to the post office. She wiped her mouth with her sleeve, looked into her cup, opened her mouth and stood up. Pulling her leg out she glanced at the observer, then at the group at her table and blinked. Putting both hands on her hips and with her mouth wide open Betty danced to the front of the post office.

### Communication Event #3

When the teacher told the class to line up at the end of the room, Betty jumped up and down, and with her lower lip under her upper lip, went to the line. She opened her mouth, closed it and bit her bottom lip, as she watched Mrs. Brown laying out some paper stepping stones with numbers on them. Mrs. Brown explained that each child would have a turn to cross the water on the stones but that they must say the number as they stepped on each stone, otherwise they would fall off. Betty added, "And if you fall off you have to swim." She made swimming motions with her arms.

As Betty waited for the game to begin she moved her mouth vertically, then bit her lower lip. She moved forward and jumped astride and together three times. She moved back to the line when the teacher chose Raymond to be first, because it was his birthday. Betty's fingers twitched and her mouth was tight as she watched Raymond crossing the rocks. She put her finger to her nose and then to her mouth. She

threw her arms into the air when Raymond got across! The children clamoured for turns and shouted in a chorus. "Me, me, me, me!" Betty put her finger to her lips and said, "Shshh!"

As Hanna crossed, Betty jumped up and down and smiled. After several children had made their crossing the teacher said she would choose someone wearing green and then someone wearing brown. Betty's eyes widened as she looked at her clothes and said, "I am! I am!" Mouth tight and arms out at her sides, she began her turn. Stepping carefully she said the numbers, reached the other side, and sat down facing the children who were still waiting.

#### Communication Event #4

Betty watched Randy cross, then put a finger to her eye, pulled her knees up under her chin and bounced up and down on her posterior. As Randy came she pointed and said, "You have gold buttons!"

The game proceeded. Betty watched and smiled. She rocked back and forth, her top teeth over her bottom lip until someone accused a boy of not saying the numbers as he walked. With encouragement from the teacher the child managed to cross. Betty gave a loud clap and looked at the others who did not respond. She frowned, pulled on her shoe laces, looked at the teacher and slid under Table Two. There she put her arm around the bottom rung of the table, and lay back smiling.

Betty looked at the teacher. "As soon as everyone

gets here we can walk back across," she smiled. She then crawled through the rung and slid toward one of the student teachers where she sat with her knees folded under her.

Betty began to frown. She looked at the teachers, then at the children and said, "There's more girls than boys." She pulled on her laces as the last boy crossed. "Now we can go back again!" she said and smiled at the teacher. Mrs. Brown ignored her and changed the game by saying, "Hanna, pick up the stone that means one less than eight." Betty lay on the floor on her stomach with her hands and feet stretched out in a swimming position. She cupped her chin in her hands and looked up as Hanna picked up stone number seven. Betty crept forward and moved some of the stones, saying, "We've gotta move these away."

She lay outstretched with her head on her arms, looking at the children who had crossed and were sitting sedately in a row. She slid under the teacher's desk and looking up at the teacher said, "You said, you said, you said!" apparently referring to the idea of going back across the water.

When Betty got no response she took a position with her posterior in the air and her elbows on the floor, chin cupped in her hands. She gazed at the "river" then slid on her stomach as if she were swimming and curled up in a ball with her arms folded around her knees.

#### Communication Event #5

Mrs. Brown said, "Let's make a circle!" Betty lay

still for approximately three seconds, got up, jumped up and down, lay down again and said, "I'm swimming in the water."

Communication Event #6

Mrs. Brown said, "Judy wants to show her shells." Betty got up, went to the post office and, with her finger in her mouth, lay down on her back with her hands under her head. She wiggled her body and legs, then pulled up her knees and looked at the ceiling. She pushed her feet and slid about, then lay still. She sat at the back of the group where the children were waiting for sharing time.

When Mrs. Brown said, "Back up, back up, back up!" Betty and two other children slid right back under Table Three and sat with their backs against the wall. Betty glanced at the teacher and said, "You said far back, so we went far back!" The teacher asked them to return. Betty came back and sat at the back of the group.

As Judy began to show her shells Betty began to move away. She glanced at Judy and at the children passing the shells around to feel them, then slid to the left until she was near the post office. She looked at the group, blinked and knelt on the floor. The teacher said, "No talking!" Betty looked at her and said, "Sh, sh, sh!" With her lower lip under her upper lip, Betty moved closer to Judy. She looked at the shells, put out her tongue and reached for a shell. She held it first to her left ear, then to her right. She looked at the teacher who was talking about snails and their shells. Betty moved closer and blinked.

Communication Event #7

Betty stepped over the group to get nearer to the teacher. Mrs. Brown held a shell to Betty's ear. Betty smiled and stepped back, where she sat down with her feet under her.

As sharing time continued Betty pulled the fringe of Trent's buckskin jacket. She put her hands on her shoes and wiggled backwards away from the group until she was near the observer. She slid away on her knees and climbed on Frank's back. She smiled as he stood and gave her a ride. The teacher said, "Come now!" Betty got down and stood. Frank grabbed her from behind, putting his arms around her chest. She smiled, pointed at David and then at Frank. She put her hands on Frank's shoulder and her arms around him. With eyes on the teacher, Betty slid away from Frank, then back again. He reached for her and pulled her onto his knee. As he let her go she slid away and then got up and went back to Frank. She pushed the hair out of his eyes and lay down with her head on Frank's legs, facing the observer. She turned over to face Frank. Mrs. Brown reprimanded the class for their inattentiveness. Betty got up.

Communication Event #8

The teacher led a discussion of a book titled, Dairyman Dan. Betty watched the teacher. Then she lay back, hands clasped around her knees, rolled forward, slid backwards but came back to the group and sat wiggling.

When a child near her sighed and said, "I'm tired,"



Betty put her finger into her mouth and said, "So am I."  
The teacher responded by saying that everyone could lie down.  
Betty lay on her stomach and slid toward Chris. She put her head on Chris' stomach, looked at Mary, wiggled her feet, wiggled her toes and finally looked at the book.

Betty eyed Randy, pulled her lips into a funny face and moved toward Frank where she lay her head on his outstretched legs. She lifted her head, peered at the book and scratched her stomach. Still looking at the book she cupped her head in her hands and pulled her knees up and down seven times. Spreading her feet apart, she got up on her knees, hands on the floor and wobbled about looking at the children as they discussed the farm.

Betty rolled over onto her back, slid close to Frank who was lying on his back, put her head on his stomach and smiled, when she saw the children behind her watching them. She turned over, looked at the teacher and the book, and Frank put his arm around her. She lifted his head, tapped his chin, and put her head down on his chest. Mrs. Brown said, "Betty! I'll have you come right up her. You don't bother other children!" Betty got up and went to the front of the group, near to the teacher.

#### Communication Event #9

Betty sat on her knees directly in front of the teacher. She pointed and moved her head because as the teacher held the book only the back of it was within Betty's view. Betty blinked, put her finger in her mouth, looked at

the teacher and hung her head. With her finger still in her mouth she looked at the cover of the book and blinked twice. Her body swayed from side to side and she then put her head down on one knee. As her head came up she blinked again and leaned far forward, trying to see the pictures in the book. She put her thumb into her mouth.

Swaying back and forth she slid back until she could see the book. She got up on her knees and with her finger in her mouth looked at the book, until the story ended.

#### Communication Event #10

Mrs. Brown introduced another book, Alfie and the Ferry Boat. As she tried to get the children settled for story time they appeared to be restless. One boy was sent away from the group and there were many requests to go to the bathroom. Betty who was still on the floor, slid around to the side of the group, looked at the teacher who was scolding someone for talking, and blinked. Mrs. Brown decided to omit the story when she sensed the restlessness. Instead she organized a bean bag relay.

As the children were forming into a line of girls and a line of boys, Betty got up and went to her line. Mary who was standing behind her put her arms around Betty's waist and lifted her. Mary put her down but kept her hands on Betty's waist. Betty put her finger into her mouth.

The teacher explained the relay. Betty pulled Mary's hands off her waist, smiled and looked at the teacher. She scratched her eyes, then counted each of the two rows pointing

at the children as she counted. She put her finger into her nose, scratched her eye and jumped up and down excitedly as the game began.

During the relay Betty was very verbal. She jumped up and down constantly and blinked. She frowned when she dropped the bag and smiled as the race went well for her team.

#### Communication Event #11

When the relay was over, the teacher discussed the open house that was to take place that evening. She encouraged the children to leave the room very tidy. Betty picked up papers from the floor, put a lace back on a shelf, and picked up the bean bags, which she patted as she walked to put them away.

#### Summary of Observation #2: Betty

This observation which was 59 minutes in length yielded 389 nonverbal cues or approximately 6.6 per minute. There were eleven communication events.

Table 10 indicates the situations which stimulated the nonverbal emissions and the quantitative and qualitative analysis of the cues recorded.

This observation took place during activities that were teacher-initiated and directed. Although Mary had little child-child interaction in Observation #1 which was child initiated and directed and provided much opportunity for interaction with other children, she interacted much more with individual children during this observation. There

TABLE 10

ANALYSIS OF OBSERVATION #2: BETTY

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
1. Watching birthday candle	1	2	1	10	0	13	3	30	27	3	27	3	26	4	1	1
2. Clean up time.	0	1	3	11	1	8	0	24	19	5	17	7	19	5	1	0
3. Preparing for number game.	2	5	1	24	0	1	2	35	18	17	34	1	26	9	3	2
4. Number game.	5	7	3	49	0	7	4	75	66	9	56	19	59	16	1	6
5. Forming a circle	0	0	0	4	0	0	0	4	4	0	2	2	4	0	2	0
6. Sharing time-shells	5	3	3	19	0	4	2	36	28	8	25	11	24	12	3	2
7. Sharing (continued) farm discussion	4	25	0	7	2	0	4	42	39	3	13	29	8	34	3	0
8. Story about dairy	3	13	3	27	0	2	1	49	44	5	30	19	30	19	3	0

TABLE 10 (Con't.)

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
9. Story completed	0	2	0	29	0	8	3	42	27	15	40	2	38	4	0	0
10. Pen bag relay	3	10	4	15	0	12	4	48	41	7	46	2	31	17	3	1
11. Clean up time.	0	0	0	0	0	4	0	4	4	0	4	0	4	0	0	0
TOTALS	23	68	18	195	3	49	23	389	317	72	134	75	249	120	19	10

Key

C-T	-	Child-teacher interaction	S	-	Symbolic Cue
C-C	-	Child-child interaction	N.S	-	Non-symbolic Cue
C-G	-	Child-group interaction	Att	-	Attentive Cue
C-S	-	Child-self interaction	I.Att	-	Inattentive Cue
C-O	-	Child-observer interaction	Intr	-	Intrapersonal Cue
C-S-E	-	Child-self-environment interaction	Inter	-	Interpersonal Cue
Com	-	Combinations of above categories	R	-	Responsive Cue
T	-	Totals	QE	-	Qualifying expression

was also an increase in the number of child-teacher interactions and when these are examined it must be noted that some of the interactions with the teacher were negative responses to teacher direction.

During this period there was an increase in child-self interaction while the child-self-environment cues decreased when compared with Observation #1.

Betty's nonverbal communication continues to be highly symbolic, attentive and intrapersonal although there was almost twice as much interpersonal interaction during this observation than there was during Observation #1.

Nonverbal interactions that are considered responses or as qualifying verbal expression remained minimal.

Observation #3, March 13, 1972; 9:00 - 10:04 a.m.

Communication Event #1

Betty came skipping down the hallway, arms swirling. She smiled as she met Mrs. Brown in the hall. She pulled off her boots and when her shoe got stuck in one boot, she went to her teacher and said, "It stuck." The teacher pulled it out. Betty smiled and said, "Thank you."

Communication Event #2

The teacher asked Betty and Mary to fold some newspapers that had been left on the floor. Betty blinked, and said, "Okay." She got down on her knees and began to fold the papers. She talked with Mary as they worked. She looked at Daniel as he entered. When Mary got up and went to Table Three, Betty stayed on the floor folding papers. She watched Mary then noticed a picture in the newspaper. Holding the newspaper with both hands as if she was reading it she looked intently at the picture. She then put it down and folded it carefully stopping momentarily to look at a page which advertised groceries.

Communication Event #3

When Judy came in Betty looked toward the door. Judy, clutching a handful of letters, announced loudly that she had some invitations. Betty called, "Judy," when Judy gave Mary an invitation, Mary came skipping over to Betty to show what she had been given. Judy went into the cloakroom. Betty got up and ran after her. A minute later she

came out with an invitation in her hand and a closed, smug smile on her face. Holding the letter high in the air, she looked at the observer, then brought it to her and said, "I think it's for Judy's birthday!"

#### Communication Event #4

Mrs. Brown reminded Betty and Mary that they had a job to do. Betty returned to folding the newspapers. She then got up and went towards Daniel, but changed directions and approached the teacher. Holding up the invitation she said something about Judy's birthday. Betty went around Table One, looked at a picture, put her finger into her mouth, moved along the shelf area and touched some play dough as she turned to go back to Table One. Her eyes were lowered. She went to a group of children near the teacher's desk, swirled about and kicked her left foot into the air. The teacher called her to come to see what Daniel had.

#### Communication Event #5

At Table One with a group of boys Betty put her finger into her nose, rubbed her eyes and with her mouth down at the corners, looked at the rabbit Dan had brought. "He's nice," she said. Looking up she noticed that Raymond was wearing sun glasses. He took them off and she put them on and blinked. Peering over the top she blinked again and said, "They fit me." Raymond snatched them and said, "No they don't." Betty blinked, scratched her nose and went to Table Three.



Communication Event #6

The teacher was introducing a game of matching shapes and colors. Betty joined the group. She knelt on a chair, looked at the teacher and then at Judy who was given first turn to play. When Betty's turn came she leaned over to add a shape. Her eyes were intent upon the game. She scratched her head, looked at the group and opened her mouth as she placed the shape. As the group discussed the rules of the game, Betty shook her head, put one leg to the floor and kept one knee on the chair. As the other children took their turns Betty blinked, leaned on the table and put one foot between the rungs on the chair. She closed her eyes, then opened them and spoke to Judy. When Mary pulled her pony tail she frowned and said, "Don't pull my hair!"

Moving her chair away from Mary she sat on one leg, raised her brows and said, "I've got three green pieces." She looked across the table at the bead rack which was being used to tally the scores. Eyes back on Judy, Betty then leaned over the table and with her lower lip under her upper lip leaned very close to the puzzle.

Communication Event #7

The teacher interrupted the game to ask about the boots that were "all over the floor" in the cloakroom. Betty ran to look but returned immediately and said, "They're not mine." Back on her chair, she sat on her knees and began to move pieces of the game. Shaking her head she looked at Mary and said, "Mary's not playing." Betty placed another

piece on the table, then fingered her nose as she looked at Mary who had returned to argue about her right to play. Betty shook her head and informed her again that she couldn't play. She looked at Mary and shook her head violently when Mary put a piece of the puzzle in place. Betty's mouth dropped open and her eyes grew large. She stared at Mary and said loudly, "Look what Mary did!" However, when Mrs. Brown looked Betty smiled and said, "Mary gets a point!" Betty then wiggled about and finally clenched her fists and leaned on them.

#### Communication Event #8

Betty chose a puzzle that she could work on alone. She leaned back, smiled and reached for the bead rack. Mrs. Brown said, "How did the game go?" Betty looked at her but did not reply. The teacher went on to say it was time to finish up. Betty's mouth protruded and she got down from the chair.

#### Communication Event #9

Betty went to the other side of the table and sat down with a peg board in front of her. As she sang to herself she began to put plastic pegs into the board. With head moving from left to right, one finger in her ear and one in her mouth, she hummed and worked. When she had made one straight row across the top, she looked at it, leaned forward and examined it closely, brushed her hair back, rested her chin in her hand and stopped singing.

Betty began to hum again as she put the pegs in until she had two rows crossing the board diagonally. She eyed her work, and took more pegs. Suddenly she put both hands over her ears because the boys began to pound at the workbench nearby. She worked with her right hand and held her left hand over her ear as the pounding continued.

#### Communication Event #10

Judy came and spoke to Betty. Betty said, "What?" and smiled. She got up and went with Judy who was carrying something hidden under a kleenex. Judy said, "Guess what I got underneath?" Betty smiled, looked at Judy and suddenly turned to go back to her peg board. She scratched her arms and looked at the observer as Judy approached her again. Once more she left her work to go with Judy to a table where there was a scale.

Betty looked at the scale and her eyes widened as Judy put a large acorn onto the scale. Betty grew excited and said, "I know why it didn't move, there's not one ounce on this." She pointed to the other tray of the scale.

#### Communication Event #11

Mouth protruding Betty went back to the peg board. She began to put pegs in and sing, "Dabba dabba dabba." She raised her brows as the board began to fill. She climbed up and stood on a chair, looking down at the board. Pushing her hair out of her eyes, she sat down again and began to sing. She worked with both hands and sang, "Ooooooooooooo." changing

her song to "Singing fee fie fiddly ei oh." Betty looked at her work, scratched her cheek and put a peg in her mouth and bit it. As the sound of pounding rose once more, Betty held her left hand tightly over her left ear.

She continued to move about, wiggle her head and legs and hold her ear as she went on filling the board. She looked up as Judy went by. She started to put the pegs back into the box, but changed her mind and went back to filling the board. A boy beside her nudged her but she ignored him. Brows raised, she looked at the observer, and went back to work singing, "The ants come marching eight by eight hurray!"

Betty looked up as a group moved to the centre area. The peg board was full. Betty stroked the pegs with the palm of her hand. She scratched her knee, looked toward Table One, looked at the observer, put a box on top of the peg board and got up and left.

#### Communication Event #12

Betty stood at Table One, hands on her hips, mouth protruding, as she looked at Daniel. The teacher asked her what she would like to do next. She pointed at Daniel and picked up a piece of paper and a pair of scissors. She folded the paper, glanced at the woodwork table where the boys were pounding, opened her paper, folded it again and licked the fold. She squeezed the fold diagonally as she looked up at the teacher and a group of children.

Communication Event #13

Mrs. Brown rang her desk bell and called everyone to come and look at something that Hanna had. Betty frowned, walked over and looked up at the teacher. She blinked. Mrs. Brown said, "Sit down," but Betty stood with the end of the scissors in her mouth and her paper in her hand. She looked at the scissors and began to cut, then walked back toward Table One. She glanced back at the group sitting on the floor in front of Hanna who was showing a spider plant. The teacher told the children they could go back to what they had been doing.

Communication Event #14

Betty folded a "windmill". She put her head to one side, scratched her ear, looked over to Table Two where some boys were talking and then moved along Table One until she was opposite Mrs. Brown. With one lip curling up she looked at the teacher, and talked with her about how to fold paper to make windmills. As she worked Betty opened and closed her mouth. Holding her work high she said, "Look! how's that?" The teacher did not respond. Betty opened and closed her mouth, and put her lower lip under her upper lip as she watched the teacher move away.

Holding her windmill high, again she looked for Mrs. Brown. The teacher was not looking in Betty's direction so she said to a boy near her, "How's that?" There was no answer. Betty frowned.

A group of drama students arrived to present a child

participation play. Betty put her finger in her nose and eyed the lady who was pushing a video camera into the room. She frowned and looked very puzzled as more drama students arrived. Standing alone she watched. Her brows were furrowed, then she saw Daniel nearby. She moved closer to him and spoke to him about the invitation he was holding. With finger in her mouth, she glanced at Judy who was reading Mary's invitation to her. Betty squeezed her nose, looked at the camera and glanced toward the post office. She went to the wicket where she was given a letter. She took it saying, "I know. I know that!"

#### Communication Event #15

Betty looked at the video camera and walked toward the lady who was going to operate it. She stood, letter in one hand, and the invitation in the other. She walked back to Table One put her finger in her nose and stood looking at the camera. Putting her windmill on the table she said, "Mrs. Brown, Mrs. Brown!" and went to stand beside the teacher who was talking to a member of the drama group. Betty blinked when Billy held up a paper cutting and said, "What is it?" She said, "It's a wheel." She followed Billy to Table Two where she picked up a pinch of salt, raised her foot and rubbed the salt into the sole of her shoe.

#### Summary of Observation #3: Betty

This observation was 63 minutes in length and yielded 338 nonverbal cues, or approximately 5.4 per minute. There

were 15 communication events.

Table 11 indicates the situations which stimulated the cues and the quantitative and qualitative analysis of the cues recorded. Six events, numbers 2, 5, 6, 7, 13, and 15, were teacher initiated but largely child-directed. The remaining events were child-initiated and child-directed. The teacher initiated events obviously led to more child-teacher nonverbal cues being emitted.

Child-child interactions exceed the child-teacher interactions while in Observation #2 which was teacher initiated and directed the reverse was true. Betty shows high self involvement through her nonverbal communication with 150 child-self cues and 113 child-self-environment cues. She appears to be highly deliberate, attentive and intra-personal in her nonverbal behaviour.

TABLE 11

ANALYSIS OF OBSERVATION #3: BETTY

Event Situation	Quantitative Analysis											Qualitative Analysis				
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
1. Arrival	3	0	0	2	0	1	1	7	7	0	7	0	4	3	0	2
2. Folding newspapers	2	2	0	2	0	6	0	12	11	1	9	3	8	4	2	0
3. Judy and invitations.	0	3	0	2	2	2	0	9	9	0	5	4	4	5	0	0
4. Wandering about room.	0	1	1	4	0	6	2	14	14	0	4	14	12	2	2	0
5. Looking at rabbit.	0	1	0	7	0	4	0	12	6	6	10	2	11	1	2	0
6. Shape and color game.	4	3	5	15	0	11	0	38	32	6	37	1	26	12	1	5
7. Shape and color game; (continued)	0	4	0	13	0	9	3	29	22	7	21	8	22	7	1	4
8. Puzzle child's choice	1	0	0	6	0	4	0	11	8	3	11	0	10	1	1	0
9. Peg board.	0	0	0	19	0	9	0	28	21	7	21	7	28	0	2	1



TABLE 11 (Con't.)

Event Situation	Quantitative Analysis										Qualitative Analysis						
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE	
10. Peg board (continued)	0	5	0	3	1	3	0	12	11	1	8	4	6	2	1	0	
11. Peg board (continued)	0	3	0	40	2	21	1	67	45	22	48	19	61	6	1	0	
12. Cut paper work.	0	1	0	4	0	11	1	17	16	1	17	0	15	2	1	0	
13. Child showing plant.	2	0	1	7	0	5	3	18	13	6	13	6	15	3	3	0	
14. Paper windmill work.	4	5	0	20	0	14	0	43	29	14	30	13	34	9	0	3	
15. Arrival of drama group.	3	1	0	6	1	7	1	19	16	3	12	7	13	6	1	1	
TOTALS	19	29	7	150	6	113	14	338	261	77	250	88	288	51	18	17	

TABLE 11 (Con't.)

<u>Key</u>			
C-T	- Child-teacher interaction	S	- Symbolic Cue
C-C	- Child-child interaction	N.S	- Non-symbolic Cue
C-G	- Child-group interaction	Att.	- Attentive Cue
C-S	- Child-self interaction	I.Att	- Inattentive Cue
C-O	- Child-observer interaction	Intr	- Intrapersonal Cue
C-S-E	- Child-self-environment interaction	Inter	- Interpersonal Cue
Com	- Combinations of above categories	R	- Responsive Cue
T	- Totals	QE	- Qualifying expression

Observation #4, March 16, 1972: 10:40 - 11:41 a.m.

Communication Event #1

Snack time was concluding. Betty sat at the record player table. She got up and went to the window to look out. Back she went to the table to gather the empty cups. She took them to Table Two and tossed them onto the centre of the table. Jumping up and down she blinked as she watched the elementary children playing outdoors.

Communication Event #2

Mrs. Brown called the group to come to a circle. Betty ignored the call and followed Karen to a shelf where she fingered some toys. She started toward the circle, but went back to the shelf and pushed her finger through a plastic cylinder.

Mrs. Brown was explaining how to play a listening game. Betty looked over but stayed by the shelf and rubbed her eyes. The teacher rang the desk bell. Betty then joined the circle. At Judy's suggestion Mrs. Brown asked the children to stand and join hands to make a better circle. Betty stood, joined hands, then sat down, crossed her knees, put her finger in her nose and watched the teacher. She closed her eyes, wiggled her feet and put her arms around her knees.

She looked at the observer, then looked around the circle, cupped her chin in her hands and waited.

This kind of behaviour continued until the teacher was ready to choose the first child to be "it". Betty

watched the other children, put her lower lip under her upper lip and then put her finger in her mouth. The teacher closed her eyes and turned to point at a child. Betty put her hands on top of her head and knelt up high as the teacher pointed. When she was not chosen, she lowered her eyes and her head and put her finger into her mouth.

The game began. The child who was "it" sat on a chair in the centre of the circle. Another child crept up behind and knocked. When "it" asked who was there the child said, "It's the fireman" and "it" had to guess who the speaker was. Betty was chosen to knock during the second game. She got up, smiled, and, with her finger in her mouth knocked. When the boy said, "Who is there?" Betty's chin went down. The teacher moved closer to her and encouraged her to say what worker she was. When she did, Trent guessed correctly and so Betty sat on the chair to be "it". However, when Tina knocked, Betty hung her head. The teacher whispered to her. After a long pause, Betty guessed correctly. She went back to the edge of the circle and sat down where she bobbed forward and backward as the game continued. After much wriggling and squirming she lay on the floor and slid away from the circle. She got up, turned one full turn, then got down and lay on her back. As she stretched out she glanced at the observer. She put her toes around the rung of Table Two and pulled herself forward. Mary came and lay on top of her. Betty smiled and swung around giving Mary a ride.

Communication Event #3

As Mary left, Betty got up and put her hands into the salt tray. She licked them four times and when a student teacher entered she glanced at the door. Her eyes moved from the student to various areas in the room, and she stood with her finger in her nose. Betty then came to the observer, looked at her and laid some folded pictures on a table nearby. Betty smiled at the observer. She opened the pictures for the observer to see, but did not speak to her.

Betty then took her pictures to Table Two where she put her hands into the salt and then into her mouth. She went to talk to the children who were now waiting at the door to go to the gym to have their school photographs taken.

Communication Event #4

As the children left, Betty went back to Table Two. The student teacher called the children to come to play the game, but Betty began to play in the salt. Moments later she joined the game. She knelt, pulled her knees up and hugged them. She whirled around and around on her posterior and then stopped with her legs outstretched and her eyes on the children.

Betty asked if she could be "it". The student did not hear her. She got up and tapped the student on the shoulder, whispered something in her ear and sat down with a smile.

Communication Event #5

Betty was called by Mrs. Brown. She went to the teacher's desk then came back to the circle where she stood jumping astride-together. Then, swinging her left arm and holding her picture in the other hand, she knelt on the floor. She got up and once more whispered to the student teacher, who allowed her to be "it". Daniel knocked. Betty guessed wrongly. She promptly got off the chair and left the circle.

Communication Event #6

Betty glanced back at Daniel and scowled. After standing beside Table Three she put her hands on her hips and ran and whispered into the student's ear. With the corner of her picture in her mouth, she stood very close to the student. When it was time for a new "it" to be chosen, Betty jumped up and down and pointed at herself. She was chosen to knock. As she knocked she changed her voice. When "it" guessed wrong Betty laughed, jumped up and down, and ran to Table Two where she was grabbed by Daniel.

Communication Event #7

The teacher called the class to come for story time. Betty walked all around the circle and sat down near the back where she looked at Mrs. Brown. She put the picture corner in her mouth and wobbled as she waited.

The discussion turned to St. Patrick's Day and when the teacher said that Betty had been to Ireland, Betty blinked

and said, "No, I didn't go there." When the teacher held up a card with shamrocks on it, Betty went up, pointed to them and said, "They're on cards, cause my Daddy has some."

As the story began Betty wrapped her picture around her leg. She sat on it, put it under her heels, and rolled it around her ankles. Glancing at the girl behind her, she lay down and slid back, keeping her eyes on the teacher.

She lay with her legs fully extended and her picture under her calves. As the story went on Betty played with her picture almost continually, interspersing this behaviour with mouth and lip movements, blinking and glancing at the book that was being read. When the teacher asked the children what "ringlets" are, Betty stood up, reached for her hair and said, "Yes, I know." She went on to explain how ringlets are made. She put her hand on her cheek as she spoke and glanced back and forth from the teacher to the group.

Betty sat down and once more fingered her pictures, and bobbed about until the story ended.

#### Communication Event #8

Mrs. Brown was called to the gym. Betty leaned on Karen, then pulled herself into a ball, put her thumb to her eye and slid toward the teacher's desk. Raymond rang the teacher's desk bell. Betty stared at him and blinked. She got up and rang the bell. The teacher came through the door. Quickly Betty moved away from the desk, her picture in her hand. She looked at Mrs. Brown and blinked.

Communication Event #9

The story resumed. Betty, still holding her picture, got up on her knees. Once again she moved her picture from her chin to her feet as the story went on.

Still looking at the book and after much movement she lay down on the floor and slid under the table and back again. Betty kept her eyes on the book but moved her knees up and down, blinked and opened and closed her mouth until the climax came when she sighed and said, "That was a wonderful thing to do!"

Communication Event #10

As story time ended Betty got up, frowned and came to the observer. The teacher went to answer a knock on the door. Upon her return Judy asked if she could do a dance. Betty scowled and stood near the teacher, mouth down at the corners. She blinked and said, "But I want to do a step hop." Judy said that she was going to do a bubble dance. The teacher asked Judy to get the children into a circle to watch. Betty hurried over to the teacher, spoke to her and then went to Judy and said something about her bubble dance. Judy said, "Betty, get into the circle!" Betty put a finger in her mouth, then smiled, joined hands in the circle, let go, and sat down.

The teacher put a record on and as the music began Judy danced. Betty watched, with finger in her mouth, and her arms folded. She smiled slightly. As Judy finished the teacher clapped. Betty looked at the teacher and



clapped too. However, Judy immediately began another dance. Betty stood up and with her hands on her hips jumped up and down and said, "Me! Me! Me!" The teacher told her it was Karen's turn. Betty said, "I'll let Karen do it."

As Karen danced, Betty put her finger into her mouth and stood marching to the music. She then danced from side to side until she reached Table Two. She danced over to the teacher's desk and back to Table Two where she picked up her picture which she had left there.

#### Communication Event #11

The children prepared to go home. Betty moved to the centre area with her picture in her hand. She ran to the cloakroom.

#### Communication Event #12

One minute later Betty came out, her coat in her hands and her boots on. The record player was playing a Cuckoo song and when she heard "Cuckoo-cuckoo-cuckoo" Betty dropped her coat and began to dance. After a few lively swirls she put her coat on and went back to the cloakroom.

When she came back, she spoke to Judy and to the teacher. She skipped around the room, and jumped up and down to the music smiling all the while. Then she put on her mittens and picked up her picture and walked toward the door. She held her picture between her teeth. Betty disappeared into the hall but came right back and looked at the clock. She spoke to Karen about the time, then came to the

observer and said, "Is the grade fours out yet?" When she was told that they were not she looked at the clock, frowned and said, "You tell me when cause I don't know the time."

### Communication Event #13

The record played on. Betty sat on a chair and watched Judy skipping about. Holding her picture in her mittened hand she looked first to the teacher and then at Judy. She began to tap one toe and bob her head in time to the music. Gradually her foot movements became a forward and back motion, which changed to swinging sideways to the rhythm of the music.

Betty looked at the clock and then at the few children who remained. She got up, jumped a few times, then sat down and tapped her feet. The tapping changed to a marching movement. Betty called to the teacher who came and sat beside her. Betty's marching movements then grew stronger and more confident but she remained on her chair. The music stopped and her feet stopped.

Betty put a mittened hand in her mouth. When the music started again, she skipped to the centre of the room but after looking at the clock she stood and watched Daniel playing in the salt. As Dan left to join Judy, Betty looked at the clock, then at the observer and danced off to the far end of the room. She stood a moment, jumped, smiled, and after checking the clock, went back to Table Two.

Betty sat down, mouth protruding as more children left. When only three including herself remained she put

her elbow on the table, and dreamy eyed tapped her feet lightly. She flapped her mitten gently. She stood up, looked at the clock, frowned and looked at the clock again. She looked at the teacher who was tidying the room. She continued to lean on the table while watching the clock. Tracy took her hand and together they skipped around the room once. Betty smiled as they skipped, but back at the table she leaned on her elbow, frowned and watched Tracy dancing.

At 11:41 Mrs. Brown told Betty that the Grade Fours would be coming out. Betty hurried off to her sister's room.

#### Summary of Observation #4: Betty

This observation was 60 minutes in length and yielded 481 nonverbal cues or approximately 8 cues per minute.

Table 12 indicates the situations which stimulated the emissions and the quantitative and qualitative analysis of Betty's nonverbal behaviour during this observation.

It must be noted that this was an unusual morning in the kindergarten. Two student teachers were present and the children were taken one at a time to the gym to have their school pictures taken. Hence there were more interruptions than usual and this could account for the fact that there was a higher number of nonverbal cues per minute emitted than in any other observation. Betty may have been reacting to the change of routine.

However, Betty's nonverbal cues continue to be largely a communication of personal nature for she emitted 227 child-self cues and 131 child-self-environment. There

TABLE 12

ANALYSIS OF OBSERVATION #4: BETTY

Event Situation	Quantitative Analysis											Qualitative Analysis				
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
1. Snack time ending.	0	0	1	3	0	7	0	11	10	1	5	6	10	1	0	0
2. Teaching listening game	4	3	3	59	1	7	6	83	66	17	62	21	61	22	3	0
3. Wandering class photograph time.	0	0	1	3	4	6	5	19	17	2	13	6	10	9	0	0
4. Student teacher leading game	4	1	1	11	0	1	5	23	23	0	20	3	12	11	1	0
5. Game (continued)	2	2	0	4	0	0	3	11	11	0	11	0	4	7	1	0
6. Game (continued)	2	3	0	4	0	4	4	17	17	0	16	1	8	9	3	1
7. Story time.	10	7	5	44	0	41	3	110	93	17	99	11	85	25	6	1
8. Teacher out of room.	2	6	1	8	0	2	1	20	17	3	15	5	12	8	2	0
9. Story time resumed	0	1	0	23	0	23	0	47	24	23	44	3	46	1	1	1

TABLE 12

Event Situation	Quantitative Analysis										Qualitative Analysis							
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE		
10. Girls dancing.	3	8	4	23	1	2	1	42	37	5	41	1	25	17	9	3		
11. Preparation for going home.	0	0	2	3	0	2	0	7	7	0	7	0	5	2	0	0		
12. Record playing children leaving.	0	0	0	7	2	12	2	23	23	0	23	0	22	1	1	2		
13. Music while waiting for sister.	2	5	1	35	1	24	0	68	61	7	68	0	59	9	2	0		
TOTALS	29	36	9	227	9	131	30	471	396	75	414	57	359	12	29	8		

Key

- C-T - Child-teacher interaction
- C-C - Child-child interaction
- C-G - Child-group interaction
- C-S - Child-self interaction
- C-O - Child-observer interaction
- C-S-E - Child-self-environment interaction
- Com - Combinations of above categories
- T - Totals

- S - Symbolic Cue
- N.S - Non-symbolic Cue
- Att - Attentive Cue
- I.Att - Inattentive Cue
- Intr. - Intrapersonal Cue
- Inter - Interpersonal Cue
- R - Responsive Cue
- QE - Qualifying expression

were more cues that indicate interaction with the observer. This may have been due to the teacher's involvement with so many other activities.

Qualitatively Betty's nonverbal behaviour is again highly symbolic, attentive and intrapersonal although there is a rise in interpersonal interaction.

A noticeable rise in the number of times Betty used the nonverbal mode as a response may be due to the fact that there was an increase in her overall interaction with other people.

Betty: Conclusions

An examination of Tables 9 to 12 reveals that in 241 minutes Betty emitted 1,583 nonverbal cues as recorded by the observer. This gives a mean emission of 6 cues per minute. It appears that Betty's nonverbal communication in an educational setting is quantitatively significant.

There were 1,204 intrapersonal nonverbal cues which is 76% of those recorded. This indicates that Betty's nonverbal communication contains much involvement with her "self".

The situation in the classroom seems to affect Betty's nonverbal cues both quantitatively and qualitatively.

Observations #1 and #3 were highly child directed, while Observations #2 and #4 were during the time that is more highly teacher directed. When Observations #1 and #2 are compared it is interesting to find that during a teacher directed period there is more child-teacher interaction and child-group interaction but that the greatest change is in child-child interaction. For Betty a teacher dominated situation appears to stimulate interaction with other children. Much time during Observation #2 was devoted to a teacher initiated activity. Betty seemed to find this too long and so found many ways of interacting with herself and her friends and at times was reprimanded for it.

In Observation #3 there is an increase in child-self interaction and a drop in child-child interaction. This was a period where there was freedom to select and pursue activities. However, there was a drop in child-child

interaction, probably because Betty became totally involved in a task of her choice, the peg board.

Observation #4 was a mixture of freedom and interruptions. Betty was more nonverbal during this period than during any other observation possibly because the children were coming and going as was the teacher and the morning routine was upset. During this period Betty emitted the highest percentage of intrapersonal nonverbal behaviour. From this examination it seems that the situation in the classroom has an important bearing on Betty's use of the nonverbal mode.

With 76% of Betty's total nonverbal cues categorized as intrapersonal it appears that her nonverbal communication is related to her affective domain.

Betty's mother spoke of her pride in her Ukrainian dancing and her kindergarten work. This is born out by the observations, for she was anxious to dance for the class and in Observation #4 watched over her picture all morning. Her mother's view that Betty prefers one friend is substantiated by the minimal number of child-group interactions. Her ability to stay with a chosen task until its completion was noted by her mother and in the observations this was strongly substantiated when she worked long at filling the peg board.

Mrs. Brown noted that Betty seems to need tactile reassurance. There was congruency between this perception and that of her mother. Both the teacher and mother noticed the use of "baby talk" as an attention getter and the



observer perceived pouting lips as had the teacher and parent. While Mrs. Brown mentioned that Betty cannot abide noise above a certain level her mother merely referred to the fact that she is prone to earache when she has a cold. The observations indicated that she was indeed bothered by noise for in Observation #3 when she was working at the peg board she repeatedly put her hands over her ears when there was pounding.

There appears from examination of the above to be more congruencies than incongruencies in the way that the mother, the teacher and the observer viewed Betty's nonverbal behaviour.

## CHAPTER 8

### FRANK

#### Frank At Home

Frank was born in Calgary in March, 1966. His mother was a "manageress of oil companies" and his father is an administrative official in land lines communications. His job entails a great deal of travel.

While not a particularly planned addition, Frank was welcomed to the family. He has one older brother and both of his parents were anxious that they have at least two children. His mother had worked to put herself through University and was 26 years old when she married. The first child arrived almost twelve years after the marriage but Frank's mother has not worked for nine years.

The pregnancy was normal until near its termination when Frank's mother became toxic and labour was induced.

Frank was a breast fed baby for three months and was then put on a bottle. He was always held when nursed and was fed on demand. He cried when he was hungry and turned his head away when he had had enough milk. Frank was a healthy baby who soon gave up his two o'clock feeding and slept through the night. When he began to eat solid food he enjoyed everything except peas. He disliked peas "with a passion," and would spit them out. Now he leaves them on his plate. He prefers sweet foods and desserts to vegetables.

Frank learned to feed himself at an early age and has never reverted to wanting to be fed. Because his older brother could do it "he could do it too."

At the table he is very verbal. He is always interrupting but when told to be quiet he will sit and wait his turn. Frank is very fond of having company to dinner and the children are always included in dinner parties.

There have been no specific changes in Frank's sleeping patterns. He doesn't have bad dreams or seem to dream often. If he does he gets up and gets into bed with his parents where he is "cuddled in." He requires no particular comfort at bedtime although he has a little toy monkey named Chee Chee that is taken to bed occasionally. His mother reads to him at bedtime unless they have company. The day that Frank came home from the hospital as an infant a radio was put beside his bed to put him to sleep so he has always been used to going to bed with no attempt being made to keep the house quiet for him.

Described by his mother as a very cuddly baby, Frank as an infant smiled at everyone who came near him. He has never showed any fear of strangers. His father is away a great deal. Frank's mother says, "I am unhappy and the children are unhappy when he is away so we get terribly excited when he is coming home and always count the days."

Frank has always coped well with new experiences. The first time he was taken on a long trip he stayed awake until 11:30 p.m. because he seemed afraid that he might miss

something. He was about two years old at the time and all the way he sat up, looked around and pointed, while his older brother slept.

He has always been delighted with his baby sitters and never upset about his mother going out. A light has always been left on in the hall and so Frank has never shown fear of the dark. If he has had a "particularly bad bawling out or a spanking" Frank seeks reassurance by coming to his mother and asking, "Do you still love me Mummy?" His mother feels that basically he knows he is loved but wants to hear it after he has been reprimanded. His mother explains that this happens quite often:

...because he is a very determined little boy and often if he wants his own way we have a tantrum. A tantrum consists of going into his bedroom and slamming his door three or four times to let me know he is peeved with the world. He stamps his feet and five minutes later comes out and says "Hi Mummy" and it's all over.

Frank has always loved his bath. He now bathes everyday and is allowed half an hour to play in the tub. As an infant he didn't like having his ears or nose cleaned and would turn his head away. He has not reacted to having his fingernails cut but one of his "baby toes" causes some anxiety. He draws his foot away and asks his mother to leave that one until the last. Frank had his first hair cut at about three years and four months and because he had watched his older brother he accepted it as a necessity. As an infant he screamed when he had to have a needle but now because his brother has an allergy shot once every two weeks he actually wants needles too. He has had no problem

adjusting to the dentist because his dentist is a friend of the family and the dentist's daughter baby sat him when he was an infant. When Frank was four he had his tonsils out. His mother stayed at the hospital with him and he showed no fears. As an infant Frank squirmed when he was soiled and was "always changed immediately."

Frank toilet trained himself by the time he was two.

Frank was mobile at an early age. He sat up when he was very young and crawled at about nine months. He celebrated his first birthday by walking alone, beaming and "showing off." His mother has never confined him to a playpen except as a convenience to herself. He was unhappy in a playpen unless he could see his mother. Otherwise he cried.

As an infant Frank played with his fingers quite a bit. He had toys strung across the crib and a little "busy box" beside him in the crib. He spent a great deal of time playing quietly in bed. After he discovered his toes he played with them "quite a lot".

During toddlerhood Frank had a playmate who lived down the street. Frank did not talk until he was three. Hence the two children just played together. The older children in the neighborhood played with him too and "thought it was quite sweet that he didn't talk when he was about two. He was very outgoing and showed it." He prefers group play now but still plays with his first friend. "Competition is marvelous for Frank. He does things far better in competition. He strives so very hard to come out on top and it is a

challenge to him."

His older brother sometimes plays with him and sometimes excludes him. When Frank is excluded he screams but his mother handles this by telling him that his brother is three years older than he is and that Frank will have to find his own friend. When he is accepted by the big boys he is very happy. He sometimes pushes in to get attention.

His mother does not feel that Frank is very imaginative although she states that he and his best friend play cowboys and Indians and other kinds of dramatic play. When he is alone, however, she says that

...it has to be constructive that is he likes definite projects that are realistic. I don't think he's terribly creative. He will work hard if you give him a puzzle or sit him down to color. He does play with building blocks and running his cars on them so there must be some creativity there.

Frank's experiences outside of his home prior to kindergarten include Sunday School and music lessons. His mother says that he started to talk in March the year that he was three and started music lessons the following September. He likes kindergarten and is proud and satisfied with the work he brings home. He demonstrates this by wanting to show it and save it for his daddy to see. His mother says, "We aren't always satisfied with it, but he is."

Frank's mother sees him as a patient child who is not overly aggressive or shy. He is "everybody's friend." He is strongly attached to his grandmother and thinks his teacher "is great." He is in his mother's eyes a "calm happy little boy," who has a long attention span and is extremely

affectionate and responsive.

### Frank at School

#### The Teacher's View of Frank

Frank's teacher feels that Frank needs tactile reassurance from herself and the other children. Although he is in some ways very independent, in others he seems to seek attention either by pouting or vanishing into the cloakroom until Mrs. Brown misses him and goes to find him.

Mrs. Brown has noticed some signs of insecurity in Frank. She says:

He's a worrier, I've discovered, quite a worrier. He was painting one day and I leaned over to look at his work. He said, 'I feel badly about my brother,' and looked very concerned. When I asked him why, he said, 'He's sick.' This is typical. He's mentioned similar things before. When his mother wasn't well he said, worriedly, 'My mother is sick.'

Although Frank is a quiet child Mrs. Brown does not consider him an introvert. He likes group play but does not enter into it with the vigor that some boys do.

His school friends are the active boys. Although he doesn't have a strong attachment for one child he joins the group that has initiated something that interests him.

His teacher says he is "not a talker," and that his response to correction is seldom verbal. He grows quiet. "You can almost see him withdraw."

Frank has revealed to his teacher that he is quite often dissatisfied with his own efforts. He will say "It's no good," or shove the project aside instead of taking it

home. He seldom wants to show or share his work. The exception to this is when he is working with his key vocabulary. Mrs. Brown describes his behaviour:

Some rather unnerving things happen with Frank. His mother is giving him reading lessons outside of kindergarten. Because of this he expects to be ahead of everyone else. If he misses a word and it becomes a discard he feels extremely badly. He is continually comparing with Jim the boy who has the most words. He keeps asking how many words Jim has and is continually bringing it up. He is very competitive in reading and I have not noticed this competitiveness in any other area.

Mrs. Brown says he often tosses his head and says, "I take reading lessons." He copes well with competitive games but is overconcerned in academic areas. His expectations are that he will be the top in reading and numbers.

The teacher referred to Frank's reading again when asked about his creative efforts. She said the more creative children who could read some words were using their words to create their own stories, but Frank had not done this.

Mrs. Brown considers Frank rather unresponsive and inattentive during story time and in other teacher directed activities. However when he is working on a task of his choice, he attends well. During the teacher directed activities he will "stay on the fringe and walk around or even play with something or someone." He may be listening with one ear but he does not appear to want to become totally involved with the activity or the group.

The teacher looks upon Frank as a quiet, follower who is fairly popular with the other children, and a passive participant in play initiated by others.



What Frank Does At KindergartenHis Nonverbal BehaviourObservation #1, February 23, 1972, 10:30 - 11:29 a.m.Communication Event #1

Snack time was ending. Frank was sitting at Table One with his hand on Raymond's shoulder. With his other hand he reached across the table to try to touch Sharon.

As he drank his juice, the teacher came by and said that after lunch the class was going to the gym. Frank kept his cup to his lips and looked into space for a moment. When the children clapped, he smiled. As he finished his snack he climbed onto Table One and sat, legs dangling. Turning to Sharon who had climbed up beside him, he poked her in the ribs. He looked at Raymond then fingered his empty cup. Frank glanced at Randy who was telling the group about what they would do in the gym. Frank opened his mouth, gazed into space and sneezed. He returned to watching Randy.

Communication Event #2

After the snack Mrs. Brown allowed two girls to demonstrate the difference between "wiggling" and "wobbling". The two words had been the topic of discussion at Table Two during snack time.

When the girls got down on the floor, Frank started for the door but came back to his place. He popped out his tongue and watched. When Mrs. Brown asked Judy and Marilyn to repeat their performance, Frank slid off the table and

stood with one hand on a chair and his head to one side as he watched.

It was time to go to the gym. Frank ran to the door. Raymond called, "Frank, Frank, I pick Frank!" Frank pulled back. Raymond tried to drag him to the line but Frank bent to tie his shoe. While the teacher tied it for him he rested his hand on her shoulder.

### Communication Event #3

Two minutes later Frank stood in the gym looking all around. He looked at the teacher and began to run about. Mrs. Brown told everyone to get down on his knees and put his hands on his lap. Frank obeyed.

The teacher asked the children to get a space of their own, Frank stayed kneeling with his arms outstretched. He stood up and, with his arms still out, watched Mrs. Brown. His mouth began to protrude and his arms dropped a little because it was several minutes before the children responded to the teacher.

Mrs. Brown told the children to "turn to measure" their space. Frank did not respond. Instead he dropped his tired arms. The teacher called, "Feet together!" Frank put his feet wide apart, and bent his arms at the elbows like the wings of a bird. The next command was, "Feet together, arms at your side." It was as if Frank had returned to reality. His response was positive.

When the aide went looking for some hoops, Frank watched her. The teacher then said, "Hands high, legs up

and down slowly, up and down, up and down." Frank watched Marie but followed the instructions.

The hoop activity began with, "Hold your hoops, and rise slowly up and down on your toes! Slowly." Frank complied but wobbled when he got up on his toes. When the teacher said, "Be jumping jacks on your toes," Frank almost fell. He stood, scratched his nose, looked at Randy and said, "I've gotta go to the bathroom."

The next activity was hopping on one toe as the teacher counted, "One, two, three, rest." Frank put his hands in his pocket, tried to hop, wobbled, frowned and with an almost pained expression mumbled, "I can't hop!" He took his hoop and tried to twirl it around his body as he eyed the boy next to him. He wobbled forward and backward but could not twirl the hoop.

When the teacher asked the children to "stand straight and find a way to balance the hoop but not with your hands," Frank held up the hoop, peered through it, put it on his shoulder, then on his head and then down. He looked around the circle at the children who were succeeding. His mouth dropped open and he let go of his hoop.

With the hoops laid on the floor in front of them the children were asked to get to the other side without touching them. Frank tried to jump over, but fell. He walked around the hoop, tried again and fell. He sat inside the hoop and slid about on the floor. He smiled and glanced at Raymond.

Mrs. Brown then asked the children to get over the hoop without bending their knees. Frank stood rigidly, hopped around in little jumps, backed up and, remaining very stiff, jumped over. The teacher smiled at him and said, "Your knees are bending." Frank smiled, stood up, stepped around and into the hoop. For several moments he ignored the teacher's instructions, picked his nose, knelt inside the hoop, fingered it, and put his head down.

The teacher began a game of "Jack in the Box jump out of the hoop at three." Frank jumped before she counted to three then sat down and played with a piece of string that was on the floor. The second time Frank jumped at the right time but fell as he came down. He smiled.

The children were to whirl the hoop and gradually move toward the floor without touching the hoop with their hands. Frank moved cautiously but his hoop flopped to the floor. He stood inside of it and laughed.

When the children closed their eyes to walk around the hoops, Frank kept his eyes half open. The hoops were then held upright and the children were to crawl through with their hands on the floor. Frank was the first one through. He looked at the teacher and said, "I got through, I got through!" There was no response. He looked at her and spoke more loudly, "Look at this Mrs. Brown." Mrs. Brown watched as he repeated his first success with a hoop. She said, "Good!"

The exercises with the hoops continued. Frank

tried hard but could not succeed until he managed to swing his hoop on his arm without losing it. He smiled and shouted, "It tingles, it tingles!" Looking at the teacher he said, "I can't stand it. It tingles!"

There were several more exercises with the hoop. Frank wobbled and fell repeatedly but never gave up and kept smiling.

#### Communication Event #4

A set of climbers was pulled into one corner of the gymnasium. The children were asked to line up to take turns. Frank went to the back of the line. He lifted the boy who was standing in front of him. He smiled, then turned and lifted Tracy who was standing behind him. He peered around the line to see how many were ahead of him and smiled as he saw Raymond on the high climber growing pale and whining, "It's too high." Raymond's fear of height seemed to please Frank. His eyes sparkled. As he waited for his turn Frank pushed a child in front of him, pulled a child behind him, stuck out his tongue, and puckered his lips. He rubbed his nose and peered around to speak to the boy in front of him. As he did so three children from behind him passed him in the line.

At the bottom rung Frank allowed another boy to push ahead of him. His turn came. He climbed to the third rung, and put his knee over while holding tightly. He put his foot on the next rung and stood for a second. Near the top he put his hands on the bottom of the high bar and watched

the boy ahead of him. The teacher told him to wait. She allowed a boy to pass Frank. He did not protest but waited patiently. He climbed the bars a second time and when he got to the top sat astride the bar and then came down. He ran off across the gym. The aide called him to come to climb again but he called, "No!"

#### Communication Event #5

Frank ran with the teacher to the storage room to get the balls. When Mrs. Brown said, "Make a big circle," Frank began to run but returned and stood waiting instructions. The teacher attempted to organize the group into pairs for a ball activity. The children grew inattentive and soon balls were rolling all around the gym. Frank saw a loose ball, grabbed it and threw it at a basket ball hoop. He chased it as it came down, smiled and lost it again.

The teacher announced that because the children were not listening they must go back to the room. Frank stopped instantly and his mouth dropped open. His eyes widened as he kicked the ball and chased it. He caught the ball, chased a little girl across the gym and was then dragged by Daniel into the line.

#### Communication Event #6

Two minutes later the class was back in the classroom. The teacher called them for story time. The other children sat down. Frank stood for a moment and looked at the teacher. He sat down with saliva bubbling up in his mouth. He pushed

to the back of the group where he blew saliva bubbles. When the story began he looked at the book, opened and closed his mouth and raised his hands and clasped them above his head. He pulled at his hair and glanced at the observer.

#### Communication Event #7

As the teacher read the story, Daddy is Home, Frank smiled. He pulled up his knees, picked at his shoes and his eyes wandered back to the book. He put his hands on his shoes and then picked up a viewmaster from a table. He looked into it, put his hand on his head, then on his nose and sneezed. He looked back at the book for a moment and blinked. His mouth dropped open. He wiped his nose on his sleeve. His mouth and fingers continued their movements as the story continued.

Frank was biting his bottom lip and playing with his shoe laces when the teacher read a phrase, "Daddy's footprints in the snow." Frank grinned, looked at the book and smiled broadly when the boy in the story threw a snowball for his father to catch.

Lip movements, tongue movements and fingering of his nose and shoes were continuous activities as the story rose to a climax. Frank rubbed his ear, scratched his head and frowned as the story ended.

#### Communication Event #8

When Mrs. Brown said that they would have another story, Frank frowned. However, the plans changed when a

child interrupted because she wanted to show something from Hawaii. As Frank knelt to watch he put his mouth to one side and frowned. He turned and took a long look at the chart on which the number of words each child knew was recorded. He then put his arms around Raymond, coughed and lay back on the floor.

Frank peered into David's face and then crawled away until he was about four feet from the group. He grinned when the teacher said, "Have a happy face!" Frank put one hand on his foot and crawled away a bit further.

When Douglas got up to show something he had brought, Frank whirled around on his posterior, got up and went to the post office, where he played and ignored the group for the remainder of the period.

#### Summary of Observation #1 Frank

This observation was 56 minutes in length and yielded 282 of Frank's nonverbal cues, or approximately five cues per minute.

Table 13 indicates the situations which stimulated the emission of the cues and the quantitative and qualitative analysis of the cues.

The situations were all teacher initiated and teacher-directed. While there was approximately as much nonverbal child-teacher interaction as nonverbal child-child interaction there was little child-group interaction in the non-verbal mode. Frank showed self involvement in 212 of the cues which is 75% of the total nonverbal cues recorded.



TABLE 13

ANALYSIS OF OBSERVATION #1: FRANK

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
1. Snack time ending.	2	4	0	7	0	2	0	15	8	7	8	7	9	6	0	1
2. Watching demonstration of wiggle and wobble.	1	0	1	7	0	9	0	18	11	7	8	10	16	2	2	2
3. Hoops in gym.	15	8	0	54	1	30	4	112	89	23	110	2	84	28	18	3
4. Climbers in gym.	4	11	3	9	0	16	0	43	32	11	28	15	25	18	3	1
5. Ball play return to classroom.	2	0	0	2	0	6	2	12	11	1	4	8	8	4	1	0
6. Preparing for story.	2	0	0	7	1	1	1	12	2	10	1	11	8	4	0	0
7. Story time.	0	0	1	44	0	5	1	51	11	40	15	36	49	2	3	0
8. Sharing time.	1	5	0	10	0	3	0	19	13	6	5	14	13	6	2	0
TOTALS	27	28	5	140	2	72	8	282	177	105	179	103	222	60	29	6

TABLE 13 (Con't.)

<u>Key</u>		S	
C-T	- Child-teacher interaction	N.S	- Symbolic Cue
C-C	- Child-child interaction	Att.	- Non-symbolic Cue
C-G	- Child-group interaction	I.Att	- Attentive Cue
C-S	- Child-self interaction	Intr.	- Inattentive Cue
C-O	- Child-observer interaction	Inter	- Intrapersonal Cue
C-S-E	- Child-self-environment interaction	R	- Interpersonal Cue
Com	- Combinations of above categories	QE	- Responsive Cue
T	- Totals		- Qualifying expression

Qualitatively Frank's nonverbal emissions in this observation were somewhat more symbolic than nonsymbolic. Similarly he was more attentive than inattentive but slightly less than one third of the cues were nonsymbolic and inattentive. In this teacher dominated situation Franks nonverbal behaviour was highly intrapersonal and only a minimal number of cues could be categorized as responses or as qualification of verbal expression.

Observation #2, March 1, 1972, 10:25 - 11:26 a.m.Communication Event #1

The children were cleaning up the room in preparation for the snack time. Frank was in the housekeeping area. He moved the stove forward, then backward, his mouth opening and closing as he did it. He ran from the corner to Table Three, peered around and ran to the end where he sat down. Mrs. Brown gave Frank some cups to distribute. He walked, feet dragging to Table Two where he slid the cups across the table. The teacher reminded him to go around and pass the cups. His mouth protruded. He pulled a chair around to the other side, went to Table One then back to Table Two where he finally handed out the cups and, squinting at the children, asked, "Anybody else need a cup?" Taking a cup for himself, he stuck out his chin and went to Table Three where he sat beside Betty.

Communication Event #2

Frank looked from one child to another at his table. The teacher called "whispering time". Frank looked at the clock and whispered to the boy beside him. Betty poked him on the side of his head. He looked at her, then whispering to himself, pointed at Table One and counted the children. When Daniel said to him, "Shut up and go to sleep," he put his head down on the table. Mrs. Brown said, "Yes, do like Daniel and have a little rest." Frank lifted his head and looked at the children who were talking at Table One.

During the "whispering time" Frank opened and closed his eyes and raised and lowered his head several times as he fingered his wrists and arms. When the teacher said, "I'm going to open the window," he looked up at her and glanced at the observer. He sat up as Mrs. Brown announced that snack time could start.

#### Communication Event #3

As he began to eat, Frank looked at Hanna. When the wind blew a tin off the sill he looked at the window then toward the teacher and Randy who were discussing why the cookies were called "ginger snaps."

The teacher drew attention to the movement of the mobiles and Frank looked up and squinted. As Mrs. Brown went to the calendar, Frank said, "This month is March." As lunch time continued Frank looked from the calendar to the window and the post office.

#### Communication Event #4

Mrs. Brown called the children to the story area. Frank got down on his knees and with three other children flapped both hands. He looked at the teacher as she sat down and he put his arm around the boy beside him. Then he leaned back until he was touching Mary.

Frank slid back and put his arm around Mary.

When the teacher asked about a certain book Frank started to go to look for it but came back. His mouth opened and closed as he looked at Mary.

Communication Event #5

Mrs. Brown asked the children to think about the word "milkman" without "saying a word". Frank looked out of the window, bobbed forward and back with his mouth opening and closing. While some of the children gave the teacher words that they associated with "milkman," Frank blinked a great deal, looked from the teacher to the observer and from one child to another and he fingered his fingers. After several minutes he put up his hand and said, "Chocolate milk." He smiled.

As the discussion continued Frank was poked and pushed by Mary. He was then pulled along the floor by Trent. Betty came up behind him and put her arms around his waist. He leaned back on her and, looking at her, tickled her knee. She made a clown face and he laughed. When Betty got in front of him and leaned far forward he bent down and looked under her dress. He looked at the book, then back at Betty and grabbed her hand.

Communication Event #6

Mrs. Brown began to read a book about cows. Betty pulled Frank onto her knee and he struggled to get off. He watched Chris who was reprimanded by the teacher. Betty tried again to pull him onto her knee and once more he struggled off. She moved away. He slid toward her just as the teacher asked him, "Frank what else do we have to do with cows?" Frank twiddled his fingers and said, "Milk them." When the teacher said that milking had already been

mentioned he blinked opened his mouth and looked at Betty. She pulled at his sweater and he slapped at her hand but missed it.

As the discussion continued, Frank looked at the teacher and then at his hands. Betty began to pat his shoulder. He looked at her and blinked. She twicked him on the ear. He looked at her as she put her hands over her eyes.

Mrs. Brown began to read again. Frank looked at the book, and then at his fingers as he played with them. He put one finger into his mouth and looked from the teacher to the observer. As the teacher read about cows chewing their cud, Frank's mouth began to imitate the movement. A great deal of inattentive behaviour ensued as Frank looked from one person to another, moved his mouth, and looked at the book occasionally. Finally he poked Hanna and the teacher said, "Frank! Come up here." Frank slid forward on his knees.

#### Communication Event #7

Frank was directly in front of the teacher. She began to tell of her experiences with cows. He pulled at his sleeve and bobbed backward and forward nine times. Slapping his knees he bobbed six more times. His mouth protruded as he watched Betty who was walking about.

As the discussion continued there was much verbalization from the other children. Frank wiggled, looked at the teacher and the book, played with his fingers and his

shoes and once more focussed on Betty who was standing at the back of the group.

The discussion turned to the meanings of words such as "pasteurized" and "homogenized". Frank glanced at the observer, with his top lip over his bottom lip. He bent and sucked the end of his lace, then tried to lace his shoe. He twisted the end of the lace and bent to lick it again. This activity continued and after five attempts he got the lace through. He pulled both laces of his right shoe, and then began to lick the lace of his left shoe. He worked until both shoes were tied.

#### Communication Event #8

It was showing time. Frank tapped Betty on the head. The discussion returned to milk and when the teacher asked how milk gets cold after it comes from the cow Frank answered, "In the frig." His answer went unnoticed so he looked at Betty who was dancing near the back of the group. He slid back beside her and took her hand. Letting it go he watched her as she danced about. He stood and looked at Mrs. Brown. Betty put her arms around him and pulled him to the floor. He moved close to her, mouth tight.

#### Communication Event #9

Showing time began. Frank watched Tracy as she showed an octopus made of string. He looked at it, then fingered his laces. As the octopus was passed around to be felt Frank's eyes followed it until he got his turn. He



held it and looked at it intently. Giving it back to Tracy he fingered his fingers, blinked, put his lower lip under his upper and then protruded his lips.

Frank eyed Randy as Randy showed a fire station. His eyes moved to Raymond who was talking about who would be invited to his birthday party. Frank moved closer to Raymond.

#### Communication Event #10

When Mrs. Brown held up a book and asked, "How many have this Curious George book?" Frank put up his hand. He watched Daniel show a Charlie Brown puppet and blinked and smiled as Billy worked the puppet. Frank slid around the back of the group. He picked up the puppet, gave it back to the owner and sat ready for the story.

#### Communication Event #11

Frank knelt high to see the pictures as Mrs. Brown began to read, Curious George Goes to the Hospital.

Frank put his hands between his knees, opened his mouth and concentrated on the book. However his concentration was interrupted by Betty who poked at the floor. He looked at her then back at the book. Frank then began bobbing and blinking as the story was interrupted for Karen to explain about X-rays. As the story resumed Frank fingered his fingers, put them into his mouth, and looked at Daniel and said, "I've got a stomach ache." His head movements continued from left to right and up and down as he attempted to keep the book in view.

When the story was interrupted by Judy who wanted to tell of her hospital experience, Frank looked at the teacher and she asked him if he had something to tell. His mouth protruded and the teacher then asked David and then Karen. Frank picked up the puppet, and with lips protruding, wiggled it on his hand. As the discussion continued Frank's eyes moved from the book to Judy who was talking, to the puppet. He tapped Dan on the head and then put his hand on Dan's shoulder. He frowned as a boy told of having "a popsicle stuck in his throat."

Frank crossed his legs and looked at the book as the story resumed. However Karen interrupted the story by standing up to tell about her mother being a nurse. Frank blinked, and looked at her, then sat motionless as the story started again. Frank became engrossed in the story and smiled when Curious George got a needle. His mouth worked up and down and his eyes watched the book.

When a boy sprawled out on the floor, the teacher looked at the clock. Frank looked at it too, moved closer to get the puppet from Dan and then moved back and paid close attention to the story. He blinked a great deal, knelt and fingered his fingers but his eyes stayed on the book until the story ended.

#### Summary of Observation #2

This observation which lasted 60 minutes yielded 401 nonverbal cues or approximately 6.7 cues per minute.

Table 14 indicates the situations which stimulated

TABLE 14

ANALYSIS OF OBSERVATION #2 FRANK

Event Situation	Quantitative Analysis											Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE	
1. Preparing for snack.	0	1	0	6	0	13	0	20	17	3	18	2	19	1	2	0	
2. Whispering time.	3	7	3	16	2	2	1	34	31	3	24	10	19	15	3	0	
3. Snack time.	0	0	1	3	0	12	1	17	17	0	17	0	15	2	4	0	
4. Preparing for story.	1	4	0	8	0	0	1	14	11	3	11	3	9	5	2	0	
5. Thinking about milkman.	3	9	1	14	2	1	0	30	23	7	20	10	15	15	2	0	
6. Story time.	6	18	0	20	1	5	5	55	52	3	28	27	26	29	5	0	
7. Lesson on milk.	5	5	0	28	1	29	0	68	57	11	26	42	47	21	2	0	
8. Showing and sharing.	1	9	1	5	1	0	0	17	17	0	6	11	5	12	1	1	
9. Showing (Continued)	0	10	1	13	0	5	1	30	26	4	27	3	19	11	4	0	

TABLE 14 (Con't.)

Event Situation	Quantitative Analysis											Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE	
10. Story time.	1	3	0	3	0	3	2	12	10	2	11	1	7	5	2	0	
11. Story time (continued).	1	12	2	61	0	26	2	104	22	82	84	20	89	15	7	1	
TOTALS	21	78	9	177	7	96	13	401	283	118	272	129	270	131	34	2	

**Key**

C-T	-	Child-teacher interaction	S	-	Symbolic Cue
C-C	-	Child-child interaction	N.S	-	Non-symbolic Cue
C-G	-	Child-group interaction	Att.	-	Attentive Cue
C-S	-	Child-self interaction	I.Att	-	Inattentive Cue
C-O	-	Child-observer interaction	Intr.	-	Intrapersonal Cue
C-S-E	-	Child-self-environment interaction	Inter	-	Interpersonal Cue
Com	-	Combinations of above categories	R	-	Responsive Cue
T	-	Totals	QE	-	Qualifying expression

the nonverbal communication which was recorded. It also reveals the quantitative and qualitative analysis of the nonverbal cues.

An examination of Table 14 reveals that during this hour which was totally teacher initiated and directed Frank emitted almost four times as many child-child nonverbal cues as child-teacher cues.

With 177 child-self cues and 96 child-self-environment cues it appears that in the situations described Frank's nonverbal communication is highly involved with his "self".

Qualitatively Frank's behaviour is more symbolic, attentive and intrapersonal than nonsymbolic, inattentive and interpersonal. However in Event #7 his inattentive behaviour rises. This was an event in which the objective appeared to be to teach facts. A similar situation occurred in Event #7 of the first observation.

Nonverbal behaviour that is categorized as responsive or qualifying expression remained minimal.

Observation #3, March 8, 1972, 9:16 - 10:16 a.m.

Communication Event #1

Frank came running down the sidewalk with another boy. They made a noisy entrance. Frank looked at the teacher and said, "Hi," in response to her greeting. He went into the cloakroom. He skipped out with his running shoes in his hand, looked at a student teacher and went to Table One. With his shoes in his hand he wandered to the tape recorder table and discovered the fish box on it. He looked, frowned and his mouth protruded. "Where's the tape recorder?" he asked.

Communication Event #2

Frank went back to Table One where he talked to Raymond. He skipped to the fish box table and took a chair back to Table One. He looked at the children at the table. They were preparing, under the direction of the student teacher, to make some instant pudding. Frank sat down. As he pulled his shoes on he blinked and looked at two boys on the opposite side of the table who were playing with the bowl. Raymond lifted a milk carton and spilled some water. Frank looked at the spill then swirled his fingers in it. He looked at Judy. She was playing with a milk carton too. Frank blinked when the teacher came to ask what had happened. He looked at her with his mouth open, then looked at the children concerned and raised his hand. He looked up at the teacher who was talking to the children. Frank then pointed and counted the number of children at the table. Sitting

dreamy eyed he suddenly noticed the mixette. He pointed at the beaters and said, "Nobody plays around with those. They'll cut!"

As the teacher began to talk about how they would take turns making pudding, Frank's mouth protruded. He gazed at the pudding box. He smiled when the teacher explained the meaning of "instant".

When Frank was asked to pour one cup of the mix, he got up on his knees and with his eyes on the cup carefully poured. He rubbed his fingers in a bit that had spilled. He looked at Betty who was at Table Two and called, "We just ran out of fluff!"

As other children took turns he knelt on his chair, folded his arms and watched. Raymond said, "I got S.S.P." Frank pulled his brows together.

Kneeling up high he watched the bowl being passed around the table until it was next to Raymond. He poked Raymond and pointing at the bowl said, "Raymond!" His turn to use the beaters came! He blinked, looked up at the teacher, looked at the other children then took hold of the handle and let it go two rounds. He looked at the girl beside him and handed it on. As the bowl moved on Frank moved his mouth putting his lower lip under his upper. He leaned first forward and then backwards and watched.

When there was noise and excitement at the science table Frank looked in that direction. He blinked and his eyes widened.

The teacher handed Frank a paper cup for his pudding. He held it in both hands, looked up at the teacher and watched the bowl still being passed around. When David took an extra turn at running the beater Frank frowned and scowled, "My turn, my turn!" His lips protruded. His mouth closed when he got his turn. As he finished beating he licked each finger and reached for a spoon. He counted aloud as he put two heaping tablespoons of pudding into his cup. When the teacher said that was enough he scowled but passed the bowl along. Frank then got a crayon and put his name on the cup.

#### Communication Event #3

Mrs. Brown was at the science table guiding the group there as they weighed various objects. Frank went toward them. Mrs. Brown said excitedly, "Daniel washed a sugar lump! Want to see it?" Frank hurried toward Daniel, looked at the lump of sugar on Daniel's palm and smiled. He said, "Huh! It dissolved!" He smiled and patted Daniel on the shoulder.

Frank returned to Table One where he picked up a spoon slapped it against his cheek, and then on his hair. As he was given more pudding he smiled and said, "I have four spoonfuls." Frank looked at the observer, played with the spoon and then at the teacher's request put his pudding on the shelf and sat at the table.



Communication #4

Frank began to wander about the room. He went to the woodwork bench and looked at the boys there. He went to Table Three where he picked up a magnet, and looked at a dish which contained pieces of metal and pins. Tracy pulled some of the pieces out with a large magnet. Frank pulled some of them off and gave them to her. Frank looked at the boys at the woodwork bench as the teacher asked them to stop hammering so that she could speak to some of the children.

Communication Event #5

Frank joined the boys at the woodwork bench. He stood and watched, then said "We could play blocks!" They answered in unison, "No." Frank blinked, and walked to the scale where he watched Chris weighing things. He picked up a weight and put it on one side of the scale. As the scale dropped Frank threw his hands into the air and said, "Holy Mackerel! Look at this! I'll show you something!" He picked up the weight and put it on again saying, "Oh oh!" He picked up a magnet and weighed it then began to weigh other articles from the table.

Communication Event #6

Frank moved on to the sand tub. Feet apart he began to dig and to discuss Gilligan's Island with another boy. As he plunged a plunger into the sand the boy said something about what Gilligan "caught". Frank twirled the plunger and said, "Don't say 'caught', say caught." Head leaning

to the left Frank looked at the boy, then at the sand then pulling sand toward himself, he said, "I'm gonna get all the sand I can."

Frank glanced at the observer then mouth protruding went back to the sand and sifted it. Suddenly he looked at David and said, "I didn't play with you for a long time." David said nothing. Frank leaned forward, pounded the sand with the sifter and looked at the sand pail. He asked David if he could "use the shovel for a sec!" The answer was a prompt, "No!" Frank frowned and said "But I need it." David handed him the shovel. Frank smiled, dug a bit, then dabbed the sand with the plunger and turned back to the observer. Eyes on the sand he pulled it into a pile and dug. He said, "I'm going to make a big pile!" He looked across at Table Two and said with a frown, "Let's don't play with this now."

#### Communication Event #7

Randy came over to the sand table. As Frank watched, David gave Randy a push and said, "You're not my buddy today." They walked to the fish box. Frank looked at Randy and shook his head as he said "You can watch, but you can't fish!" Frank put the line in. He held his lower lip under his upper lip as he fished. When he pulled up a fish David said "You caught the baby again, bad, stupid baby!" Frank blinked and squinted as David threw the fish back in. Frank let the line sink again and as he pulled it up David said, "Oh two babies!" He pulled it off threw it in and said, "You're in trouble." Frank got up on a chair, knelt and peered into

the box. David and Randy gave him a push. His mouth dropped open, his eyes closed and he scratched his ear as he spoke to Randy and frowned. Frank looked even more puzzled as David put his arm around Randy and said something about, "Now we're buddies."

Frank looked into the box, reached in, shook the box and pulled out a fish with a seven on it. Randy and David shook the box. Frank leaned back and laughed and said, "Ya caught one," as David stood up on his chair. As the boys continued to catch fish Randy put his arms around both Frank and David and said, "We're gonna eat! We're all buddies. Right!" Frank scowled as Randy clowned noisily about pretending to eat the fish. Frank moved toward Table Two but went back when David did not come.

#### Communication Event #8

Frank climbed up on a chair and David told him to close his eyes. David dropped the line into the box for Frank and put a fish on it. Frank pulled, opened his eyes and smiled because he had caught two fish. This sequence was repeated twice. Then Randy grabbed the line and gave it to David. Frank frowned and looked at the box and said, "Pull pull!" as Randy attached a fish.

#### Communication Event #9

Frank got down from the chair, put his finger in his nose and with his mouth protruding went to Table One. He wandered to the shelf, picked up a car and pushed.

it across the floor. He ran after it. Another boy joined him in chasing it. The other boy gave Frank a push. Frank slid on his knees to Raymond and said, "I'm the police." He held up the red car. Raymond replied, "No police allowed." Frank frowned and said, "Then I'm not police." He put the red car back in the box, and picked up a plane. Holding it high he flew it across the room to where David was fishing. He smiled as he went by and flew to the block area where he hung the plane nose down from the edge of a block. Then Frank turned to face the entire class and hands behind his back looked at everyone and called loudly, "Hey mine's hanging!" No one responded.

#### Communication Event #10

Mrs. Brown came by and said, "Time to clean up." Frank looked up at her and said, "Mine's hanging!" The teacher smiled and commented. Frank began to clean up by throwing blocks into boxes. As the student teacher walked by Frank looked at her, picked up his plane and went flying down the centre of the room making airplane noises. He circled and brought the plane near to the observer where he hung it nose down on the back of a chair. Looking at the observer, he said, "I can hang it!" The observer smiled. Frank grinned, left the plane and went to Table Two.

He picked up a pencil and holding it horizontally rubbed it across the salt. David put a truck in the salt and they watched as it made tracks. Frank said, "Can I try it?" David shook his head and said, "You never let me try

your super plane!" Frank leaned close to David and said, "I'll let you have my plane." There was no response so Frank picked up his plane and pushed it in the salt. Left foot over his right, he leaned forward making plane sounds as he pushed it. Chris leaned over from the opposite side of the table and said, "You can try my pencil." Frank shook his head and said, "I have to play 'hang my plane'."

Frank hung his plane on the chair, then took it to the box. He looked at the teacher who was assigning clean up tasks. Then he went to Table One to sit down for lunch. Suddenly he jumped up and ran to the shelf to get his pudding.

#### Summary of Observation #3: Frank

This observation was 57 minutes in length and there were 312 nonverbal cues recorded or approximately 5.6 per minute.

Table 15 indicates the situations in which the cues were emitted and the quantitative and qualitative analysis of the cues recorded.

An examination of Table 15 indicates that during this hour, which was almost totally child-initiated and child-directed with the exception of Event #2 (the pudding making) there is a decrease in the amount of nonverbal communication when compared with Table 14 in which the entire period was teacher directed. It must also be noted that event #2 yielded much more nonverbal interaction than any other event.

TABLE 15

ANALYSIS OF OBSERVATION #3: FRANK

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
1. Arrival.	2	1	0	1	1	6	0	11	10	1	11	0	7	4	0	2
2. Making pudding.	6	23	4	35	0	34	0	102	86	16	102	1	71	31	10	5
3. Science sugar discovery.	1	4	0	3	0	11	0	19	18	1	15	4	14	5	2	2
4. Wandering	0	0	2	2	0	6	0	10	9	1	10	0	8	2	1	0
5. Weighing at science table.	0	1	0	2	0	5	0	8	7	1	8	0	7	1	2	1
6. Sand play.	1	12	1	15	2	26	2	59	53	6	59	0	43	16	0	6
7. Fishing.	0	7	1	15	0	14	1	38	38	0	38	0	30	8	1	3
8. Fishing (continued)	0	1	0	10	0	6	1	18	14	4	18	0	17	1	1	1
9. Moving car & plane play.	0	2	2	6	0	6	4	20	18	2	20	0	16	4	1	3

TABLE 15 (Con't.)

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
10. Clean up time.	3	1	0	4	1	16	1	26	26	0	26	0	21	5	6	5
TOTALS	13	53	10	93	4	130	9	312	311	32	307	5	234	78	24	29

Key

C-T	-	Child-teacher interaction	S	-	Symbolic Cue
C-C	-	Child-child interaction	N.S	-	Non-symbolic Cue
C-G	-	Child-group interaction	Att.	-	Attentive Cue
C-S	-	Child-self interaction	I.Att	-	Inattentive Cue
C-O	-	Child-observer interaction	Intr.	-	Intrapersonal Cue
C-S-E	-	Child-self-environment interaction	Inter	-	Interpersonal Cue
Com	-	Combinations of above categories	R	-	Responsive Cue
T	-	Totals	QE	-	Qualifying expression

There is a decrease in child-teacher nonverbal interaction and almost half of the child-teacher cues were emitted during Event #2. The rise in child-self environment cues may indicate that Frank explores his environment when free from direction.

Qualitatively the most pertinent factor is that the amount of inattentive behaviour is almost nil when Frank is pursuing his own tasks. There is an increase in self involvement and more nonverbal communication which qualifies a verbal utterance.



Observation #4, March 12, 1972: 10:05 - 11:29 a.m.

Communication Event #1

Frank was at the woodwork table holding a nail which he began to pound into a board. He looked from Judy opposite him to two boys who were chasing each other, to the pile of blocks. His mouth closed as he began to hum. Turning his piece of wood over, Frank went back to pounding. His head leaned to the left as he concentrated on his work. He frowned and looked at David who began to saw. As a member of a university drama group entered Frank looked at her and mouth protruding went back to his woodwork. The teacher called for the children to "come to a big circle."

Communication Event #2

Frank sat with his back against the wall chart and pointing at the children who were in front of him called, "Back, back back!" Crossing his legs with his knees pulled up Frank watched the children who were getting ready to watch the play. He fingered his fingernails, looked around the circle and then at Betty who was sitting beside him. His eyes moved to Angela, the student who was to narrate the drama. Noticing that some boys in front of him were closer, he slid forward, and looked up at Angela as she began to tell a story about a dragon in a village. The story proceeded. Frank clasped his hands in an excited fashion when a lady dressed in black entered. He blinked twice and propped his head up in his hands. His head bobbed back and forth. His

eyes grew wide as the footsteps of the dragon were heard coming down the hall.

#### Communication Event #3

When the dragon, dressed in a long green and yellow, horny tailed costume, entered, Frank put his finger in his mouth. He gazed at the dragon. Gradually when the dragon smiled, he smiled. Putting his chin in his hands he blinked continually as the dragon walked around the circle. Frank's tongue popped in and out and his head began to wobble back and forth.

#### Communication Event #4

The dragon left the room and an Indian traveler entered. Frank eyed the traveler. He opened his mouth and threw his head back. As the drama went on Frank rubbed the back of his neck, and looked from Angela to the traveler. The Indian begged for alms and Frank put up his hand to indicate that he had something to give. He leaned forward as Betty handed the traveler an imaginary pillow. "I'll put some fluff in the pillow," he said as he mimed filling the pillow with fluff. After the traveler passed by he blinked, smiled, and fingered his fingers as Angela followed the traveler. He blinked when the traveler and Angela discussed calling "The Spirit of Flame," to get rid of the fiery dragon. When Angela called upon the children to help call the spirit Frank joined hands with the group, closed his eyes tightly and earnestly said the magic words in chorus with his school

mates. "Whiz-a-wool! Whiz-a-wool!" they repeated.

#### Communication Event #5

A girl dressed in a long flowing gown of fiery orange and red colors, came whirling in. Frank looked at her, his eyes wide. His mouth dropped open. He blinked and looked at Angela then looked back at the "flame". His eyes moved quickly from one to the other and there was much blinking until Angela asked the children "We really did see a dragon didn't we?" Frank nodded vigorously and said, "Yesssss!"

#### Communication Event #6

Suddenly the sound of the dragon's feet could be heard. Frank's eyes widened! He smiled broadly. When the "flame" put her hands over her face, Frank put his hands over his eyes, and peeked through his fingers. When the "flame" suggested that bees could put a dragon to sleep Frank made the buzzing sound with the group. He stopped as they continued. He pulled his bottom lip. Very slowly the dragon sank into a deep sleep. Frank blinked! When the dragon began to snore Frank pulled his bottom lip. As Angela suggested that they count the spikes on the dragon's tail Frank leaned forward to watch but did not count. Head to one side, mouth open and fingering his fingers he smiled as he watched. As the story continued Frank put his finger into his mouth and watched intently, blinking several times. The dragon awoke and asked for something yellow. Frank smiled as the children made suggestions.

Communication Event #7

The play was over and the cast returned to talk to the children. Frank pushed into the group which crowded around the dragon. Several times he said, "Know what Dragon Man!" but was not heard. Finally the "dragon," got down on his knees at eye level with Frank. Frank looked him in the eye and asked, "Are you still friendly?" Frank put his hands behind his back and kept his eye on the dragon as they conversed briefly. As the video tape began to replay the story Frank looked at the screen. He noticed the elementary school children coming out for recess and climbed up on Table Two to look out. He put his hand on a boy's shoulder and looked first out the window, then at the dragon, then at the video screen. He finally looked at the salt tray and said, to the dragon, "Hey if you put some of that salt on you you won't slip." The dragon wrote the word "dragon" in the salt. Frank smiled and slapped at the dragon to get his attention. Then he printed, "Frank," in the salt.

As the teacher invited the cast to stay for snack time, Frank ran to Table One, then back to Table Two where he tugged at the dragon's spikes and said "Want to sit by me?" He hurried to Table Three, sat down and pointed at a chair. Frank held out a cup for him, but the dragon told him they must leave. Frank waved. His eyes followed the dragon to the door.

Communication Event #8

Frank smiled, then stamped his feet and called for

juice. His mouth worked up and down as he waited. As the teacher came to serve him he looked up at her and said, "Mrs. Brown! Mrs. Brown! It was just a play?" He looked from one child to another, wiggled his feet then played with his cookie rolling it like a wheel. He finally began his snack.

#### Communication Event #9

As snack time ended Frank got up fingered his fingers and looking at the teacher said, "Hey Mrs. Brown!" When she did not answer he went to the science table and began to put items on the scale. He moved back to Table Three looked at the boys at the tape recorder, went over and grabbed the microphone.

#### Communication Event #10

When Mrs. Brown called, "Come on boys!" Frank pushed the stop button and ran to the semi circle for story time. He eyed Mrs. Brown and took a place at the back of the group. Frank went to the garbage to deposit a piece of paper, returned and kneeling at the back with his mouth open he looked up at the book The Gingerbread Man. His right hand reached to take hold of his right toe and he crossed his legs under him. He pulled Betty's pony tail. The story began. Frank popped his tongue out and moved it around and around licking his lips and his chin. The story was interrupted by a boy who reminded the teacher that she had forgotten "show and tell". Frank's head dropped and he put his finger into his mouth. He looked up at Mary who was standing

nearby, then began to play with his shoes. As Raymond began to show his watch, Frank wobbled on his knees, and with many mouth movements blinked and looked at Raymond. As Raymond finished, Frank looked at Mrs. Brown and said, "I have something to tell them." There was no response. Frank blinked and put his hands behind his back. He began to blow saliva bubbles as he watched a boy showing "silly putty". When the teacher asked, "What shape is it?" Frank replied, "Like an egg." and Mrs. Brown said, "That's right Douglas." Frank looked puzzled. His mouth protruded. He then said "Mrs. Brown I have two things to tell." However he was not heard and the other children continued to display their treasures while Frank continued to blink and put up his hand in an attempt to be noticed. Finally Mrs. Brown said, "Frank is next." Frank smiled, pointed at his teeth and said, "I've got molars coming in and in one week it's my birthday!" He smiled.

#### Communication Event #11

The children insisted that there was more to show. Frank clasped his hands behind his back, then pulled his sleeve and raised his hands to clasp them on top of his head as he listened. He looked at a girl who was telling something then fingered Chris' shirt, and put his arm around Billy and pulled him toward himself. He put his head on Billy's arm then on Billy's shoulder and sat fingering his fingers.

When David began to tell about "baby kittens" Frank

looked at David and blinked. He crossed his fingers as a discussion of "birth" followed. He whispered to a girl behind him, and ran his fingers through Billy's hair. Lower lip under his upper Frank waited until the teacher mentioned time. He looked at the clock. Frank threw his head back as a boy told of "puppies". He shook his left hand, then his right, then looked at Randy. He rubbed his back. His eyes moved to the girl who wanted to show something. Frank put his arms around Randy first at his waist, then at his shoulder.

#### Communication Event #12

As Mrs. Brown began to read a story about Mr. Bear, Frank looked at the book and sat very still. He fingered his fingers and blew some saliva bubbles. He tapped his knees and blinked. His mouth opened and closed and his tongue popped in and out but he kept his eyes on the book. He continued to play with his hands and fingers, move his mouth, smiled, scratched his head, and played with his hair but his body remained almost motionless. This kind of behaviour continued until the climax of the story when he threw his arms into the air then stretched and clasped his hands behind his neck. As the story ended he looked at the clock, got up and went to the cloakroom.

#### Summary of Observation #4: Frank

This observation was 54 minutes in length and there were 332 nonverbal cues recorded. This is an average of approximately 6 cues per minute.

Table 16 indicates the situations which evoked the cues and the quantitative and qualitative analysis of the cues.

An examination of Table 16 reveals that in this hour the activities were adult-initiated and adult-directed. The category child-teacher includes Frank's interaction with any other adult for example the narrator of the drama and student teachers who played the various roles in the play. Events #4, #5 and #7 indicate that there was more child-adult involvement in this highly imaginative dramatic presentation intended to involve the children. There was more child-self involvement during the last four events when the activity was teacher-initiated and directed and the situation returned to a realistic rather than an imaginative one.

Qualitatively Frank's nonverbal communication is highly symbolic, attentive and intrapersonal. Most of the non-symbolic cues recorded were related to attentiveness. For example Frank appears to blink a great deal when he is totally involved.



TABLE 16

ANALYSIS OF OBSERVATIONS: FRANK

Event Situation	Quantitative Analysis										Qualitative Analysis						
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE	
1. Woodwork.	1	4	1	2	0	10	0	18	16	2	3	15	12	6	0	0	
2. Preparing to watch drama.	3	1	3	9	0	1	0	17	13	4	17	0	10	7	0	1	
3. Dragon entrance and exit.	1	0	0	9	0	0	0	10	5	5	10	0	9	1	7	0	
4. Indian traveler begging.	5	0	1	12	0	1	0	19	11	8	19	0	13	6	3	0	
5. Flame scene.	6	0	1	7	0	0	1	15	11	4	15	0	8	7	1	1	
6. Second dragon scene.	2	0	0	21	0	0	3	26	15	11	26	0	24	2	2	0	
7. Talking with dragon.	5	1	1	6	0	10	7	29	26	3	27	2	22	7	2	3	
8. Snack time.	1	4	0	6	0	2	0	13	10	3	13	0	8	5	1	1	
9. Wandering after snack.	1	0	0	3	0	9	1	14	13	1	11	3	12	2	0	1	
10. Sharing and showing.	3	6	1	37	0	7	6	60	41	19	51	9	37	23	3	2	

TABLE 16 (Con't.)

Event Situation	Quantitative Analysis										Qualitative Analysis					
	C-T	C-C	C-G	C-S	C-O	C-S-E	Com	T	S	N.S	Att	I.Att	Intr	Inter	R	QE
11. Sharing (continued).	2	18	0	15	0	0	2	37	34	3	34	3	15	22	2	0
12. Story time.	0	0	0	18	0	3	0	21	9	12	21	0	21	0	0	0
13. Story (continued).	1	5	0	43	0	4	0	53	28	25	52	1	47	6	1	1
TOTALS	31	39	8	188	0	47	20	332	232	100	299	33	238	94	22	10

Key

- C-T - Child-teacher interaction
- C-C - Child-child interaction
- C-G - Child-group interaction
- C-S - Child-self interaction
- C-O - Child-observer interaction
- C-S-E - Child-self-environment interaction
- Com - Combinations of above categories
- T - Totals

- S - Symbolic Cue
- N.S - Non-symbolic Cue
- Att. - Attentive Cue
- I.Att - Inattentive Cue
- Intr. - Intrapersonal Cue
- Inter - Interpersonal Cue
- R - Responsive Cue
- QE - Qualifying expression

## FRANK: CONCLUSIONS

The nonverbal cues emitted by Frank appear to be quantitatively significant. In 227 minutes of observed behaviour 1,327 nonverbal cues were recorded yielding a mean of 5.8 per minute.

Of these nonverbal cues 73% were categorized as intrapersonal. Frank thus seems to use the nonverbal mode when communicating with his "self", more than when he communicates with others.

Examination of Tables 13 to 16 inclusive indicates that the quantity of Frank's nonverbal communication varies little in differing situations, but that the quality is affected by whether the activity is teacher-directed and initiated or child-directed and initiated. For example Frank's nonverbal cues indicate greater attentiveness when the task is one of his own choice.

Because there is such a high degree of intrapersonal nonverbal communication in Frank's total pattern of communication it appears that his mode of communicating may be related to his emotional state.

There is some degree of congruency between the mother's perception of Frank's nonverbal communication and that of his kindergarten teacher. For example both indicate that he does little that is imaginative. This perception is incongruent with Observation #4 in which Frank became totally involved in a child participation play that was highly imaginative.

While Frank's mother recognizes that Frank likes tactile reassurance his teacher describes this as a "need". The observer perceived this need frequently.

Frank's mother feels that he indicates satisfaction with his efforts at school while Mrs. Brown has observed nonverbal behaviour which indicates some dissatisfaction.

Although Frank's mother tells of tantrums when he has been punished, Mrs. Brown says that at school Frank either withdraws or disappears when he is upset or wants attention.

Mrs. Brown sees Frank as highly competitive in academic areas but as a follower in other activities. His mother indicates that she feels he enjoys competition.

## CHAPTER 9

### CONCLUSIONS AND IMPLICATIONS

This chapter is in two sections. The first section reflects on the findings of the studies as related to the questions posed in Chapter 1. The second indicates the implications of the findings for early childhood education, and further research.

#### CONCLUSIONS

Subject to the limitations of the study, the following conclusions seem to be justified. Each refers to a specific question posed in Chapter 1.

1. Is the quantity of nonverbal communication in early childhood education significant? The number of recorded nonverbal cues ranged from 1,288 for Mary to 1,583 for Betty with a mean for the four children of 5.85 per minute. This appears to be substantial evidence that the nonverbal communication cues emitted by a child in an early childhood setting is a significant part of his total communication.

2. With whom does the child interact most frequently through the nonverbal mode? The number of nonverbal cues categorized as intrapersonal ranged from 900 for Billy to 1,204 for Betty or from 68% to 76% of the total emissions. The study indicates, therefore, that the child in an early childhood setting appears to communicate through the

nonverbal mode more frequently with his "self" than with anyone else.

3. Is nonverbal communication related to the affective domain of the child? In view of the significant number of intrapersonal nonverbal cues emitted by each child, as indicated in question two above, it appears that nonverbal communication is related to the affective domain of the child.

4. Is there a relationship between the classroom situation and the amount and quality of nonverbal communication? Tables 13 to 16 indicate that the situation may not affect the quantity of Frank's nonverbal communication. However Betty, Mary and Billy show an increase in nonverbal communication during teacher-initiated, teacher-dominated situations. Thus for some children the quantity of nonverbal communication is affected by the situation. However, each of the four children revealed that the quality of the nonverbal communication was affected by the situation. For example, Betty's nonverbal communication was more symbolic and attentive during self-selected, self-directed activities than during teacher-initiated, teacher-directed activities.

5. Does a mother perceive nonverbal cues and relate them to the feelings of her child? Billy's mother observed negative nonverbal cues and her observations were congruent with those of the observer. Mary's mother was aware of her fleeting attention to tasks, but did not view this as negative behaviour. Betty's mother was aware of her pouting and reversal to baby talk. Due to incongruencies in

perception and interpretation of the nonverbal cues by the mother and observer, it is suggested that mothers may be less aware of the nonverbal mode after the advent of speech. The negative nonverbal cues more often than the positive seem to be observed and interpreted by the mothers as the child's feelings.

6. Does a teacher of young children perceive the child's nonverbal cues and relate them to the child's emotional state? The teacher was unaware of Billy's picking his fingernails and holding his genitals. She was sensitive to Mary's "hurt look" and Billy's and Frank's need for tactile reassurance. Thus it appears that the teacher of young children can become aware of nonverbal cues and relate them to the child's emotional state.

7. & 8. Are there congruencies in the mother's and the teacher's perception and interpretation of the nonverbal communication of the child?

Are there incongruencies between the teacher's and the mother's perception and interpretation of the nonverbal communication of the child? Both Mary's mother and teacher were aware of her fleeting attention to tasks but there was incongruency in their interpretation of this behaviour. Both Betty's mother and her teacher were aware of her reversal to baby talk and her pouting. Mrs. Brown was unaware of the nonverbal cues that Billy's mother perceived, for example, his picking his fingernails and holding his genitals. Frank's teacher seemed aware of more nonverbal cues emitted

by Frank than his mother was, and there were some incongruencies in their interpretation of his nonverbal communication. It appears that there are incongruencies in the mother's and teacher's perception and interpretation of a child's nonverbal cues. Mothers may be less objective due to their emotional ties with the child. However they may be more observant because they have spent more time with the child in a smaller group setting.

9. Can an objective observer discover patterns of nonverbal behaviour of a child in an early childhood setting? The abundance of data obtained by the observer in each individual study indicates that it is possible for a trained observer to observe and record nonverbal cues in an early childhood setting. Furthermore, the repetition of behaviours such as Billy's mouth movements, Mary's blinking, and Betty's gross body movements reveal that patterns of nonverbal behaviour can be revealed by observation over a substantial period of time.

10. Are the perceptions of such an observer congruent or incongruent with those of the mother and the teacher? There were some congruencies between the observer's perception of each child's nonverbal communication and those of the mother and the teacher. However, there were many instances of incongruency of interpretation of the observed behaviour.



### IMPLICATIONS

The abundance of nonverbal communication that was recorded in this study indicates that in an early childhood educational setting nonverbal communication is a vital part of the child's total communication pattern.

Because the children who were observed emitted highly intrapersonal nonverbal cues, the implication seems to be that nonverbal communication carries important meaning for educators who are attempting to understand the affective domain. This finding also indicates the need for rigorous research to determine what feelings are present and how they are revealed nonverbally. However a nonverbal cue that is observed may have different meanings for different children and may change according to time, place and situation. This seems to imply that further study is necessary at the individual level.

As more information in this area becomes available it should be utilized in teacher education so that those who work with young children may detect early negative nonverbal cues, and relate them to a child's feelings about school. Only in this way can the child benefit from the research.

Because the parent's perceptions do differ in some ways from those of the teacher, it is vitally important for parents and teachers of young children to build a trusting relationship so that they may discuss the child openly and discover congruencies and incongruencies in their view of him.

Only then can they plan together for development of his total self.

The study has implications for further research to ascertain (1) the possible psychological meaning involved in individual patterns of nonverbal communication (2) the effectiveness of a parent-teacher study of the individual child with mutual feed-back (3) the need for and suggested changes in the curriculum and methodology in early childhood education and (4) methods of selecting and screening of prospective early childhood educators who can relate to and understand each child's nonverbal communication in relation to his emotional state.

Finally, the researcher feels compelled to reveal an aspect of the study that seems pertinent to understanding human communication. Throughout the observing, recording, categorizing and writing about the nonverbal communication of a child there was a gradual but very real feeling on the part of the researcher that she was becoming closely associated with each child as a person. As the study proceeded to the writing stage, the child seemed to become a presence pervading the room. This feeling of understanding a child, whom the researcher had not met until a few months earlier and with whom there had been no verbal discourse, appears to indicate that other educators might find this method of observation and analysis a means of achieving a deeper understanding of children.

## BIBLIOGRAPHY

- Affleck, Muriel and Pearl Turner (Editor). Early Childhood Education: A Position Paper. Edmonton: The Alberta Teacher's Association, 1971.
- Almy, Millie. Ways of Studying Children. New York: Teacher's College Press, 1959.
- Anthony, E. J. and C. Koupernik. The Child in His Family. New York: Wiley Interscience, 1970.
- Asch, S. E. Social Psychology. Englewood Cliffs: Prentice-Hall, 1952.
- Avila, D. L. and A. W. Combs and W. Purkey. The Helping Relationship Source Book. Boston: Allyn and Bacon, 1971.
- Berman, Louise. "The Research Scene", Keeping Up with Elementary Education, Fall, 1971. 5-6.
- Beamis, Katherine A. and P. G. Liberty. ERIC Reports. Bethesda; Leasco Information Products Inc., 1970.
- Bernard, H. W. and W. C. Huckins. Psychosocial Dynamics of Effective Behaviour. Boston: Holbrook Press, 1971.
- Birdwhistell, R. L. Kinesics and Context. Philadelphia: University of Pennsylvania Press, 1970.
- Campbell, J. H. and H. W. Hepler (Editors). Dimensions in Communication. Belmont: Wadsworth Pub. co. 1966.
- Campbell, J. H. and C. W. Barnes. "Interaction Analysis a Breakthrough," Phi Delta Kappan, 50: 587-589, June, 1969.
- Candland, D. K. (Editor). Emotion: Bodily Change. Princeton: D. Van Nostrand Inc., 1962.
- Carter, D. D. Help! Those Kids are Driving Me Crazy. Champaign, Ill: Research Press, 1962.
- Church, J. Three Babies. New York: Vintage Books, 1968.
- Church, J. Language and the Discovery of Reality. New York: Vintage Books, 1961.
- Cohen, M. D. (Editor). A Lap To Sit on and Much More. Washington: A.C.E.I. Bulletin, 1971.

- Combs, A. W. and D. L. Avila, and W. Purkey. Helping Relationships. Boston: Allyn and Bacon, 1971.
- Combs, C. F., "Self-Perception and Scholastic Underachievement in the Academically Capable," The Personnel Guidance Journal, 43: 47-51, 1964.
- Commission on Emotional Learning Disorders in Children. One Million Children. Toronto: Leonard Crainford, 1970.
- Coopersmith, S. The Antecedents of Self-Esteem. San Francisco: W. H. Freeman and Co., 1967.
- Cratty, B. J. Some Educational Implications of Movement. Seattle: Special Child Pub. Inc., 1970.
- Davitz, J. R. The Communication of Emotional Meaning. New York: McGraw-Hill, 1964.
- Dinkmeyer, D. C. Child Development: The Emerging Self. New Jersey: Prentice-Hall, 1965.
- Elkin, F. The Child and Society. Toronto: Random House, 1960.
- Evans, T. P. "Teacher Verbal and Nonverbal Behaviours and Their Relationship to Personality," Journal of Experimental Education, 38: 1: 38-47, Fall, 1967.
- Fabun, D. Dimensions of Change. London: Collier-MacMillan, 1971.
- Fast, J. Body Language. New York: M. Evans and Co., 1970.
- Fink, P. J. "Introspection and the Teacher's Personality," Journal of the Reading Specialist, October, 1971.
- Frank, L. K. On the Importance of Infancy. New York: Random House, 1968.
- French, R. L. and C. M. Galloway. "A New Look at Classroom Interactions," Educational Leadership, March, 1970.
- French, R. L. "Analyzing and Improving Nonverbal Communication: a model for Inservice Education." Theory Into Practice, 10: 300-303, 1971.
- Galloway, C. "Nonverbal Communication," The Instructor, April, 1968. 46-48.
- Grant, Barbara. The Teacher Moves: An Analysis of Nonverbal Activity. New York: Teacher's College Press, 1971.
- Hall, E. T. The Silent Language. Greenwich: Fawcett Pub., 1969.

- Hamachek, D. E. Encounters With the Self. New York: Holt, Rhinehart and Winston, 1971.
- Helmstadter, G. C. Research Concepts in Human Behaviour. New York: Appleton-Century-Crofts, 1970.
- Howson, G. (Editor). Children at School. London: Heinemann Educational Books, 1970.
- Hudgins, B. B. The Instructional Process. Chicago: Rand McNally and Co., 1971.
- Hutt, S. J. and Corinne Hutt. Behaviour Studies in Psychiatry. Oxford: Pergamon Press, 1970.
- Jenkins, G. H. "Children Communicate Needs," Childhood Education, 45:2:58-60, 1968.
- Jersild, A. In Search of Self. New York: Teacher's College Press, 1952.
- Katz, Lillian and D. L. Peters and Nancy Stein. "Observing Behaviour in Kindergarten and Preschool Classes," Childhood Education, 48:6:400-405, February, 1968.
- Kilber, J. Behavioural Objectives in Instruction. Boston: Allyn and Bacon, 1970.
- Langer, Susanne. Philosophy in a New Key. New York: Harvard University Press, 1951.
- Lytton, H. "Observation Studies of Parent-Child Interaction: A Methodological Review," Child Development, 42:3:651-684, September, 1971.
- Messer, Eunice. Children, Psychology and the Teacher. London: McGraw-Hill, 1967.
- Miel, Alice and Louise Berman. Educating the Young People of the World. N. E. A. 1970.
- Prescott, L. Self-Consistency, A Theory of Personality. New York: Island Press, 1945.
- Reese, H. W. Advances in Child Development and Behaviour. New York: Academic Press, 1971.
- Roderick, Jessie. "The Research Scene," Keeping up With Elementary Education, Fall, 1971. 5-6.
- Rotheney, J. W. Methods of Studying the Individual Child. Waltham, Mass: Ginn-Blaisdell, 1968.

- Ruesch, J. and W. Kees. Nonverbal Communication. Los Angeles: University of California Press, 1966.
- Sarason, S. et al. Anxiety in Elementary School Children. New York: John Wiley & Sons, 1960.
- Scagliotta, E. G. Initial Learning Assessment. Belmont: Academic Therapy Publications, 1970.
- Scott, J. P. Early Experience and the Organization of Behaviour. Belmont: Brooks Cole Pub. Co., 1968.
- Sears, S. and Pauline Sherman. In Pursuit of Self Esteem. Belmont: Wadsworth Pub. Co., 1964.
- Shantz, F. C. Perceptual and Cognitive Aspects of Body Experience. New York: Academic Press, 1969.
- Shaw, M. C. and G. J. Alves. "The Self-Concept of Bright Academic Underachievers: Continued." The Personnel and Guidance Journal, 963,42: 401-403.
- Simon, Anita and G. Boyer. (Editors). Mirrors of Behaviour Volume A. Philadelphia: Simon and Boyer, 1970.
- Simon, Anita and G. Boyer (Editors). Mirrors of Behaviour Volume B. Philadelphia: Simon and Boyer, 1970.
- Sunderlin, Sylvia; Assoc. Ed. Migrant Children and Their Education. Washington: A. C. E. I., 1971.
- Taylor, Katharine. Parents and Children Learn Together. New York: Teacher's College Press, 1967.
- Thomas, A. et al. Behavioural Individuality in Early Childhood. New York: University Press, 1964.
- Travers, J. F. Fundamentals of Educational Psychology. Scranton: International Textbook Co., 1970.
- Victoria, J. "A Language for Affective Education," Theory into Practice, 10:4:300-304, 1971.
- Wattenberg, W. W. and C. Clifford. "Relations of Self Concepts to Beginning Achievement in Reading," Child Development, 35:461-467, 1964.
- Weber, Lillian. The English Infant School and Informal Education. Englewood Cliffs: Prentice-Hall, 1971.
- Wiener, M. and A. Mehrabian. Language Within Language. New York: Appleton-Century-Crofts, 1968.

Williams, R. L. and S. Cole. "Self Concept and School Adjustment," Personality and Guidance Journal. 47:478-481, 1968.

Yawkey, T. D., "The Research Scene," Keeping Up With Elementary Education, Fall, 5-6, 1971.

APPENDIX A

Interview Questions:

Mothers



## PREAMBLE

In order to understand and describe the nonverbal communication of a child in his early years it is necessary to have certain information. Please feel free to say that you cannot recall or that you prefer not to answer any of the questions. However your co-operation in elaborating as you see fit will be appreciated.

## QUESTIONS

1. What was your occupation before marriage? Are you working now? If so where? What is your husband's occupation?
2. What was the date of ....'s birth? Where?
3. Was .... an unexpected or a planned addition to your family? What is his ordinal position? Older brothers? Younger brothers? Older sisters? Younger sisters?
4. Was the pregnancy and birth a normal one? Any difficulties?
5. As an infant did you take .... to a public health clinic or to your own pediatrician? Would you mind telling me which one?
6. Let us try to recall your child's early months and follow through to the present. Please bear in mind that we are interested in nonverbal behaviour particularly as it relates to emotions? Was .... a breast or bottle fed baby? Did you hold him to feed him or use a sling or both and why?
7. How did he indicate satiation? Did he have any colic?

If so how long did it last?

8. Can you describe any reactions when ... began to eat solid foods, juice or any other new foods?
9. Was his feeding on demand or on a schedule?
10. After ... could feed himself did he ever revert to wanting to be fed? How did he let you know?
11. Can you describe any eating habits from the early months to the present that were unusual or could be regarded as upsets.
12. At the present time when .... is at the table does he verbalize a great deal, some or little? Have you noticed any nonverbal reactions to foods, other members of the family or company for dinner?
13. What is .... favorite food? How does he react when it is served? What foods does he dislike? Can you describe his reactions to these?
14. Can you describe ....'s early sleeping patterns? When did he begin to sleep through the night?
15. Can you comment on his changing sleeping patterns from birth to six months; from six months to two years; from three years of age to the present?
16. At what age did .... learn to climb out of the crib? How did he react? How did you react? Did he climb into bed with you and your husband? How did you deal with this?

17. Please describe any bedtime comfort that he has required in his early years and up to the present for example a favorite toy, his thumb, a soother, rocking of the crib, a story, a song etc.
18. Has there been any evidence of bad dreams or nightmares? Can you describe his behaviour at such times.
19. Was .... a cuddly baby, fairly cuddly, or not cuddly?
20. Can you describe any early responses to people for example to mother, to father, to siblings, to strangers?
21. Please describe briefly any responses to new experiences which have occurred from his early months to the present for example eating away from home, long trips, changes of routine, new baby sitters etc.
22. Do you recall when .... first discovered his own body as a separate entity for example his reactions to his fingers, his toes, his genitals, his image in the mirror etc.
23. When did he first notice other things in the crib for example mobiles, toys? Can you describe his reactions?
24. What were his early reactions to another child? Can you recall any incidents with other children during toddlerhood?
25. Can you describe his associations with his peers from age one to age five? Would you describe him dependent or independent or somewhere in between? Do you regard him as a leader or a follower in play situations? Is he

aggressive or non-aggressive?

26. If .... wanted your attention as an infant or toddler how did he get it? How does he seek attention now other than verbally?
27. What institutions other than kindergarten has he attended? What were his reactions?
28. What kind of play does he now prefer, solitary, parallel or group? Do you consider him an active or passive participant? Does he play for long spans or short before he seeks your attention?
29. Can you describe ....'s response to his bath during his early weeks, during toddlerhood and at the present time?
30. Did he react to ear and nose cleaning in his early months? Any reactions now?
31. Did he react to nail cutting or to going to the barber?
32. How did he accept visits to the doctor and necessary inoculations?
33. Did he react when he first visited the dentist? How does he cope with this now?
34. Has .... had any serious illnesses? Did he require hospitalization? How did he react?
35. Did .... show any reactions to loud noises or loss of balance during his early months, during toddlerhood, or recently?

36. When did .... first sit, crawl, and walk? How did he reveal pride in these achievements? Would you consider him a physically active child, fairly active, or inactive in his early months? in toddlerhood? at present?
37. Did you allow him to explore his environment when he became mobile or was it necessary to restrict him? What were his reactions when restricted?
38. Is he venturesome or timid about exploration in a new environment? Please comment.
39. Some children react in amusing and interesting ways to the tasks of dressing and undressing. Can you recall any incidents relevant to these activities? Can he dress himself fully now? Has he any frustrations and if so how are they revealed?
40. How does .... show that he likes someone? How does he show his dislike or fear of a person?
41. Has he any specific fears? What ones can you recall from his earlier years? How were they manifested?
42. Did .... have any specific reactions to toilet training? Did bedwetting persist longer than usual? What feelings did he exhibit if they did?
43. At the present time does .... accept new situations with ease?
44. How does he react to stress or feelings of inadequacy or failure?

45. Do his siblings choose to play with him often, sometimes, seldom or never? How does he react?
46. How does .... seek reassurance from you or others in the family?
47. How does he react when it is necessary for you to correct him?
48. How does he evaluate his school work? Does he seem dissatisfied or satisfied with his efforts? Please describe what he does?
49. Does .... indulge in dramatic play? Please describe this briefly.
50. Has .... any strong attachments to people.
51. Do you consider him a happy child?
52. If nonverbal communication is defined as any behaviour that excludes vocalization would you say that .... is more verbal than nonverbal, more nonverbal than verbal or a mixture of the two?
53. Can you describe any habits that .... has at present that seem to reveal his inner feelings?
54. Can you add to this any other information which might help us to understand how he reveals his feelings through nonverbal communication.

Thank you for your co-operation.

APPENDIX B

Interview Questions:  
Teacher

## QUESTIONS

1. Do you consider .... more a leader than a follower or somewhere in between? Please elaborate.
2. Does he need to experience tactile reassurance frequently, seldom, never? Please describe.
3. Where would you place him on a continuum from dependent to independent insofar as his relationships with you or with other children are concerned?
4. Does he seek your attention, frequently, seldom, never?  
How does he seek attention?
5. Do you consider him a secure child? Please elaborate.
6. Do you feel that he has any specific fears or worries?  
How are these revealed?
7. Would you class him as an introvert an extrovert or somewhere in between?
8. Have you observed any habits that might reveal his inner feelings for example nail biting or hair twisting?
9. Is .... a sociable child? What kind of play does he pursue most frequently?
10. Does he have any strong attachments to people in the kindergarten, children or adults?
11. Do you feel that he can express his thoughts well verbally?
12. If nonverbal communication is defined as any communication



which excludes vocalization would you classify .... as more verbal than nonverbal, more nonverbal than verbal or a fairly even mixture of the two?

13. Does he accept new situations with ease?
14. How does he react to correction?
15. How does he evaluate his own work efforts? Are his evaluations realistic in terms of his ability?
16. Can you describe any situations in kindergarten which seem to frustrate him? How is this frustration manifested?
17. Would you describe him as a popular child, fairly popular or more of a loner? How do you know?
18. Do you consider him a creative child? Why?
19. Is he usually attentive or inattentive at a task?
20. At play is he active or passive? Is he a leader or a follower?
21. Is there anything you would care to add regarding the emotions that .... reveals through what he does rather than what he says?